# **Impact of Re-mastery of Prior Knowledge Skills on the Retention of New Mathematical Content**

An Interactive Qualifying Project Report

submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

Degree of Bachelor of Science

by

Alexandra Birch

Quinten Palmer

Jeffrey Namias

on

April 25, 2012

Approved:

Neil Heffernan, Advisor

Cristina Heffernan, Advisor

#### Abstract

This Interactive Qualifying Project (IQP) focused on the impact of the re-mastery of prior knowledge skills on the retention of new mathematical content, using the non-profit, computerbased system of ASSISTments. The study took place over the 2011 – 2012 Academic year, encompassing four middle school classrooms and four books from the Connected Mathematics Project (CMP) curriculum. Two weeks prior to the start of a new mathematics unit, the experimental group was given an opportunity to practice skill building sets identified as prior knowledge skills which were needed for success in the new unit. Data from the study concluded that re-mastery of prior knowledge skills may be beneficial in the mastery of new content.

# **Table of Contents**

Abstract 2
Table of Contents 3
Table of Figures 4
Table of Tables 4
Introduction
Background
Metrics and Scenarios
The Setup
The Experiment
Results
Part One: Comparing and Scaling and Thinking with Mathematical Models
Initial Analysis13
Subject Ranking System14
Performance of "Grit" Subjects 16
Performance of High vs. Low Prior Knowledge Subjects
Impact of Re-mastery of Prior Knowledge
Mastery Learning – Proof of Concept 21
Part Two: The Counterbalance
Mastery Learning – Proof of Concept
Conclusion
Acknowledgements
References

# Table of Figures

Figure 1: Graphical Analysis of "grit subjects" on prior knowledge pretest scores vs. core	
knowledge posttest scores	17
Figure 2: Graphical analysis of high vs. low prior knowledge subjects	20
Figure 3: Effectiveness of Mastery Learning on the retention of prior knowledge skills for	
Accentuate the Negative	22
Figure 4: Effectiveness of Mastery Learning on the retention of prior knowledge skill	s for
Comparing and Scaling	24

## **Table of Tables**

Table 1: Initial analysis for Accentuate the Negative on three different filters to test for	
statistical significance	14
Table 2: Table of values associated with the analysis of "grit subjects"	18

#### Introduction

ASSISTments is a free public service of WPI, which is developed with funds from federal grant money. The online platform assists students with helping learn academic content including English and mathematics. In the ASSISTments online community, students receive formative assessment outside of class time, while receiving feedback in the form of hints and instant correctness gratification, as if they were with an instructor. Additionally, teachers are able to get feedback from assigned material in order to adjust their classroom instruction and pacing.

ASSISTments is now used in many middle schools across Massachusetts, available for students for extra practice and reinforcement of class content. Many researchers suggest, however, that the next step for ASSISTments is to prepare students from new mathematical content by allowing them the opportunity to re-master skills learned in previous units that are necessary for success in the new material.

In response to a curriculum re-design of the Connected Mathematics Project (CMP) focusing on the issue of prior knowledge skills, the goal of this study was to evaluate the impact of re-mastering prior knowledge skills on the retention of new mathematical content. In the study, students were given a set of skill sets to practice on, which had been selected as prior knowledge skills, two weeks before the start of a new unit. Pretest, mid test and posttest assessments were given at the beginning, middle and end of the study to track the students' progress against a control group of students. Data on the skills sets completed, as well as the scores on the assessments, were analyzed in this study to attempt to draw statistically significant conclusions of the study. The analysis of the collected student performance data and the conclusion of the experiments are presented in this paper.

#### Background

The influence of retrieval on success in retention and mastery of material has been shown to be important through multiple academic studies. A study by Mark Carrier and Harold Pashler of the University of California, San Diego, revealed that retrieval of material is beneficial to the effect that it provides another study opportunity for recall and retention (Carrier 1992). Using two experiments with different stimulus and response times, the pure study trial (ST) and the Test Trial / Study Trial (TTST) methods, the research showed that subjects given the TTST test were more likely to remember more ordered response pairs. Rather than expose subjects to stimuli and response at the same time, as in the ST study, subjects in the TTST study were first given stimuli, followed by the presentation of response items later in time.

One explanation given for this conclusion is that subjects in the TTST study were given the opportunity to recognize stimuli that were difficult to recall, and then were able to adjust and focus primarily on the retention of those specific stimuli. The principle, that prior practice of stimuli related to new material leads to a higher rate of retention, was taken and applied towards connected learning mathematics, culminating in a curriculum re-design and multiple proof of concept studies.

The study of prior knowledge skills, as related to connected learning mathematics, started with a tactical curriculum re-design for the Connected Mathematics Project (CMP), across the units from the sixth to the eighth grade. The re-design focused on the principles of spacing and assessment, which were implemented in the practice of knowledge components, referred to in this paper as skills. In relation to the TTST study, prior knowledge skills represented the stimuli, and the core concepts of the new unit represented the response. In the study, prior knowledge

skills that are expected to have been mastered in earlier units are introduced or refreshed in subjects' minds before the introduction of new material, with the expectation that this re-mastery of prior knowledge would lead to greater retention in new core skills presented in the unit.

To accomplish the re-design of the CMP curriculum, the University of Illinois at Chicago (UIC) and Worcester Polytechnic Institute (WPI) spent time tagging all CMP homework and assessment problems with the content each item practices, the context in which the skill occurs, the procedures involved in solving the problem, and the type of responses required (Year 2 Report). From this work, UIC and WPI were able to tag and identify over 150 skills and 70 linked, prerequisite relationships between skills. Researchers were then able to identify skills in the curriculum that were expected to be mastered before the start of a specific unit. By restructuring teacher's material to reflect this information, the team was able to provide teachers with a way of gauging the retention level of skills learned previously, which were relevant to the upcoming unit. Modifications to the curriculum materials, which allowed students the opportunity to practice previously mastered skills, increased students' acquisition and mastery of new material found in the unit (Year 2 Report). This research has culminated in a two thousand student paper study due to run next spring, as well as multiple smaller online studies, including this Interactive Qualifying Project (IQP).

As stated previously, the goal of this paper is to evaluate the impact of re-mastering relevant prior mathematical knowledge on acquiring new mathematical knowledge. Students in the study were broken into an experimental group and a control group, and while the control group was given irrelevant skill sets, the experimental group was given a chance to practice and re-master all relevant prior knowledge skills needed for success in the upcoming unit. Practice was spaced over the two weeks prior to the start of the unit, and students were assessed at the beginning and end of the practice, as well as at the end of the unit. This study constituted a more precise test of the benefits of retention of prior mathematical knowledge. It was hypothesized students in the experimental group, who were given additional practice on prior skills, would be better prepared to handle the new mathematical content in the unit and therefore demonstrate higher levels of proficiency on presented topics.

#### **Metrics and Scenarios**

#### **The Setup**

The setup for the study on the impact of re-mastering prior knowledge skills on acquiring new mathematical knowledge was started by sorting and organizing the prior knowledge skills selected by the University of Illinois at Chicago (UIC) and Worcester Polytechnic Institute (WPI) teams into the selected books for the study. The Connected Mathematics Project (CMP) books that were used in this study were: Accentuate the Negative and Comparing and Scaling for the 7<sup>th</sup> grade students and Thinking with Mathematical Models and Looking for Pythagoras for the 8<sup>th</sup> grade students.

Subjects in the control and experimental groups, who started with Accentuate the Negative in the first half of the study, were then switched and provided counterbalance data when they completed Comparing and Scaling. Similarly, subjects who started with Thinking with Mathematical Models in their classrooms provided counterbalance data in their completion of Looking for Pythagoras as the next unit. In is important to note that for the Accentuate the Negative and Comparing and Scaling, the UIC team, including Kevin Dietz selected the prior knowledge skills, whereas for Thinking with Mathematical Models and Looking for Pythagoras the WPI team completed the initial analysis on selecting prior knowledge skills. Using this analysis, members from the Interactive Qualifying Project (IQP) team were able to generate a list of ASSISTments skill builders to assign students in the experimental group. Skill builders, which are each a series of problems requiring students to get three problems in a row correct to achieve mastery, for the subjects in the control group were chosen based on their relative irrelevance to the mathematical content in the new unit.

In addition to providing subjects in the experimental group with an opportunity to remaster prior knowledge skills, both the experimental and the control groups were given assessments to track and compare their knowledge in both the prior knowledge skills and the core knowledge of the unit. There were three tests involved in administering this study: a pretest, a mid test, and a posttest. The format for the pretest and posttest both were identical structure, and had 2 parts to them. The first part of the tests evaluated students on core knowledge of the new unit, and the second part of the test evaluated students on the prior knowledge skills of the unit. For the first part the group started with an ASSISTments based exam used as a practice exam by teachers during the unit, and deleted duplicates of any problems that were of the same format or repetitive. This first part contained between 10 and 20 problems. The second part was composed of 1 problem from each of the skill builders used for the re-mastery of prior knowledge, given to the experimental group. The mid test only consisted of 1 problem from each of the prerequisites. There were usually around 10 skill builders so the second half of the pretest and posttest, as well as the mid test, was usually around 10 problems. Representations of the pretest, mid test and posttest can be found in the appendix of this report. For all three of these tests, the mode on ASSISTments was set to "test", which meant that the students did not get any hints or any feedback during completion.

In order to understand the connections between the prior knowledge skills and the core knowledge in the new unit, the group mapped the 2 components of the pretest to each other. Each of the Core problems was mapped to prior knowledge skills which were necessary to complete the problem, and this mapping can be found in the *Prior Knowledge Skills to Core Skills – Relevant Mapping* Appendix. It is important to note that for Accentuate the Negative, each of the core knowledge problems dealt intrinsically with integers, while selected prior

knowledge skills all dealt with fractions and decimal number sense. For Thinking with Mathematical Models, the core knowledge problems mapped very closely to the prior knowledge skills. For Looking for Pythagoras, the IQP team was forced to omit the "Properties and Classifications of Triangles" skill because of lack of an ASSISTments skill builder, but concluded after the mapping of the unit that it was one of the key prior knowledge skills for understanding the core knowledge of the new unit. Comparing and Scaling was well mapped, with a fair distribution of prerequisites being required for the core material.

#### **The Experiment**

The study on the impact of re-mastery of prior knowledge skills for the improved retention of new mathematical content took place over the past academic year, September 2011 to May 2012. Coordination of the study needed the cooperation of multiple entities, including the ASSISTments staff, the Interactive Qualifying Project (IQP) team, and the faculty and staff at the subject middle schools.

At the start of the study, students from four middle school classrooms, who already used ASSISTments in their day-to-day learning of the mathematics curriculum, were split into the control group and the experimental group. As stated previously, while students in the control group received various irrelevant skill sets to work on, students in the experimental group were given skill builders for each of the prior knowledge skills that were identified by the UIC and WPI as prior knowledge skills needed for success in the upcoming unit.

To break the students into groups of equal skill level, students were sorted on their current grade for the class, and then every other student was put into one of the two groups. This way, there was an even representation of skill levels in both the control and experimental groups.

Once the control and experimental group were set up, teachers were given group assignments to be delivered anonymously in class. Members of the IQP team spent time navigating through the teacher's accounts on ASSISTments to load and set up all material needed for the study.

After the control and experimental groups were created and the material had been loaded into the assignments folder, careful coordination with the teachers in the study was needed to set up the timing of the study, which was critical for its success. To accurately test the hypothesis of the effect of spacing on the retention of mathematical content, subjects started practice of prior knowledge skills two weeks prior to the start of the unit, at a pace which was determined by the teachers. Formative assessments, to test subjects' progress, were given at the beginning of the study, after all of the prior knowledge practice was completed, and at the end of the new mathematical unit. Those assessments were the pretest, mid test and posttest respectively, which have been explained in depth above.

In order to preserve consistency and control during the study, teachers were told not to access the data from their students, with the exception of checking to make sure that they were all working towards completion of the assigned materials. Once the study was completed, teachers were allowed access to their students' data and a counterbalance experiment was set up on the next book in their curriculum.

#### Results

# Part One: Comparing and Scaling and Thinking with Mathematical Models

#### **Initial Analysis**

When the first data came in for Accentuate the Negative, it became apparent that some sort of filtering would need to be applied so that only the students who had been exposed to the relevant elements of the experiment would remain. In its raw form, the data contained many students who had failed to complete the pretest, posttest, numerous homework assignments, mid test, and even combinations of these assignments. When all of the unfiltered data was analyzed at once, the data showed the experimental group scoring 19% higher on the core knowledge, examining the difference between posttest and pretest scores, with differences of 31% and 26% for the experimental and control groups respectively. However, this was not statistically significant with a 2-tailed ttest producing a p-value of 0.1037.

The first filter applied limited the data so that only students with a prior assessment (pretest score) and later assessment (posttest score) would be examined, as students who failed to complete either or both assignments had no metric by which they could be reasonably compared. With this filter alone, the data now showed the experimental group scoring 23% higher on the core knowledge, examining the difference between posttest and pretest scores, with differences of 32% and 26% for the experimental and control groups respectively. Again, this result was not statistically significant with p-value of 0.0597, though was very close to being below the targeted 0.05.

Next, a filter was applied to differentiate between students who scored well on the core knowledge initially, the crude assumption being that they may have taken the work more seriously. This filter, which was applied to the set of data already limited by the above filter, was implemented with a median split on the core knowledge portion of the pretest assessment. It is important to note that only students above the median score were examined in this portion. This data showed a gain of 56% for the experimental group over the control group in core knowledge, with the posttest and pretest score differences being 28% and 18% for experimental and control groups respectively. This result was statistically significant at 0.0237. A summary of the filtered results can be seen in table 1 below.

Filter Applied	Relevant Skills Group (Pre to Post)	Irrelevant Skills Group (Pre to Post)	T-test Score
Un-filtered Data	31	26	0.1037
Completed both Pre and Post	32	26	0.0597
High Starting Core Knowledge	28	18	0.0237

Table 1: Initial analysis for Accentuate the Negative on three different filters to test for statistical significance

Similar filtering and manipulation of the data was attempted with the data from Thinking with Mathematical Models, but there was no resulting statistically significant data. Upon reflection into the mapping of the prior knowledge skills to the core knowledge problems of the pretest and posttest assessments, the team hypothesized that since the prior knowledge skills mapped so closely to the core knowledge of the unit, as stated previously in metrics and scenarios, students had a chance to practice and re-master prior knowledge skills during the unit, regardless of if they had been given the opportunity to re-mast these prior knowledge skills in the two weeks previous to the start of the unit. The rest of the analysis in the paper will focus primarily on the data received from Accentuate the Negative and its counterbalance data from Comparing and Scaling, rather than Thinking with Mathematical Models.

#### **Subject Ranking System**

The idea of reducing the set of data to only subjects meeting certain criteria based on the group's judgment was considered, though ultimately proved to be unprofitable in implementation. With the aim of defining various subject groups to include and exclude in the analysis data set to better show the experimental effect of prerequisite conditioning, three groups were defined.

The first, the "ceiling students", were abstractly defined as subjects so proficient in the relevant (core) knowledge at the time of pretest that they did not have appropriate room to grow throughout the experiment. The consensus was that such subjects should be removed from consideration as the inability to demonstrate growth deemed them ineffective for use in testing the study's research hypothesis. It should be noted that this rational is contrary and opposite to that found in the initial analysis section, whereby the group of subjects commanding scores superior to the median for subjects on core knowledge pretest sections was the *only* group considered fit to analyze. Interestingly, it followed that the group of "ceiling subjects" was in fact the only group to achieve statistically significant growth, as calculated by t-test, in core knowledge from pretest to posttest. Resultantly, simply removing the "ceiling kids" was not an option, but still efforts continued to include the limiting of "ceiling students" in some larger equation of student ranking that might better depict the actual experimental effect.

The second group defined was "grit subjects", who may have struggle greatly throughout the course of completing their prerequisite skill builders assignments but ultimately persisted through success. The idea here was to avoid discounting a group of students that on the surface may not have seemed serious about their work (based on their homework percent correct), but in actuality did care enough to work hard, despite struggling, and eventually master the assignment. Upon deeper inspection, it could be said that this is in fact the very group of students that stand to benefit most from such programs of prerequisite conditioning as examined in this study. With this in mind, various metrics and scores were generated in an effort to better understand this population, and data analyzed on "grit subjects" resulted in statistically significant results.

The third group defined was "hard working subjects", those who completed 100% of the assigned homework through to mastery (three correct in a row). Both in efforts to filter the data in combination with the above two defined group, as well as in exclusion of them, not productive result was found. Perhaps the takeaway lesson here is that in any classroom there will be a variety of background knowledge, skill sets, and capabilities among students. If the goal is to create a general use system to augment preparedness for the standard curriculum, but the population of subjects must be reduced (beyond those that failed to participate fully in the study) to simply show any amount of desirable effect, then perhaps such a system is not truly effective. Rather, a significant effect should be evident when looking at the participating classroom population in its entirety, as was successfully done in this study, and not by artificial manipulations of the data predicated on the analyzer's judgment.

#### **Performance of "Grit" Subjects**

As stated previously, "grit subjects" are defined as students who, even though they do not necessary understand the material, are working hard to master the prior skills and eventually do. Specifically, these were the subjects that during skill builders answer very few questions correctly but end up mastering at least 8 prior skills. Analysis on "grit subjects" was done for the data on Accentuate the Negative. For "answered very few correctly" the analysis was going to use students who were 1 SD below the mean, but so few students were, the study instead used students who were below the mean for their respected groups.

Relevant Group: 34

Irrelevant Group: 38

And who mastered 8 or more skills:

Relevant group: 20

Irrelevant Group: 17



Figure 1: Graphical Analysis of "grit subjects" on prior knowledge pretest scores vs. core knowledge posttest scores

As shown the graph, with subjects' scores on the prior knowledge skills on the pretest on the horizontal axis and subjects' scores on the core knowledge skills on the posttest, Subjects who worked hard to practice and re-master the prior knowledge skills gained more knowledge between the pretest and the posttest than the subjects without practice on the prior knowledge skills.

Model Summary									
Model				Change Statistics					
	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.710 <sub>a</sub>	.504	.450	.15759	.504	9.470	3	28	.000

a. Predictors: (Constant), CondxPrePriorC, Condition10, PrePriorC

			ANOVAb			
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.706	3	.235	9.470	.000 <sub>a</sub>
	Residual	.695	28	.025		
	Total	1.401	31			

.....

a. Predictors: (Constant), CondxPrePriorC, Condition10, PrePriorC

b. Dependent Variable: PostCore

	Coefficients <sub>a</sub>					
Model		Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.568	.040		14.224	.000
	Condition10	.131	.060	.312	2.192	.037
	PrePriorC	.468	.191	.430	2.449	.021
	CondxPrePriorC	.540	.294	.337	1.836	.077

a. Dependent Variable: PostCore

Table 2: Table of values associated with the analysis of "grit subjects"

The above table of the data from this analysis shows results which show statistically significant differences between the experimental and control groups. The analysis of "grit subjects" has shown that students has shown that students who work hard to re-master prior knowledge skills before the start of the unit perform higher and retain more knowledge than

students who do not have the chance to re-master prior knowledge skills. This is a promising result, because it shows that the study of prior knowledge skills has the opportunity to impact low knowledge, hard-working students.

#### Performance of High vs. Low Prior Knowledge Subjects

Another approach that was taken in analyzing the data was to develop questions about different types of subjects and provide answers using the data. The team wanted to see if subjects who came into the study with a strong handle on prior knowledge skills would do better in the unit. Kevin Dietz at the UIC ran some analysis on the Accentuate the Negative data investigating the question of how the performance of high prior knowledge and low prior knowledge subjects were affected by the study. Kevin first ran a hierarchical regression on the pretest scores of the prior knowledge skills. This accounted for significant variance. The students who scored higher on the prior knowledge section of the pretest also scored significantly higher on the core material section of the posttest. Kevin also split the data on those who practiced relevant and irrelevant skills. He found that those who studied the relevant skills did score higher on the posttest core material. The final step was finding the interaction between the two. This was not found to be statistically significant. Figure 1 below shows the results of this analysis. It shows specifically, the Relevant Skills practice condition performed better at the core post-test than the Irrelevant Skills practice condition. In Step 3, the interaction between the two terms was entered, which was not significant, t(94) = -.77, ns.



Figure 2: Graphical analysis of high vs. low prior knowledge subjects

#### **Impact of Re-mastery of Prior Knowledge**

A key question that the team looked to answer in the study was if the students actually mastered the prior knowledge skills, was it of benefit them in learning the new material. Additionally, Kevin studied the impact of re-mastery of prior knowledge skills on the retention of those skills, essentially studying whether or not the assigned practice was helpful even in the retention of the prior knowledge skills above all else. To complete this analysis for Accentuate the Negative, he ran 2 (Condition: Relevant Prior Skills, Irrelevant Skills) x 3 (Test: pretest, mid test, posttest) ANOVA using the scores of the pretest, mid test, and posttest of only the prior knowledge skills. He found that the students who had been practicing the relevant prior skills performed better on the mid test, but both groups performed about the same on the prior skills section of the posttest.

#### **Mastery Learning - Proof of Concept**

One of the questions that can be reinforced using the data from Accentuate the Negative is whether or not mastery learning as a concept is effective, which has already been shown in the ARRS study (Heffernan 2012). To do this the team looked at the pretest, mid test, and posttest of the prior knowledge skills, or the second part of the pretest and posttest assessments. This was achieved first by comparing changes in scores for the two conditions from prior knowledge skills pretest to prior knowledge skills posttest. Then the team looked at how mastery of the prior knowledge skill set was maintained throughout the course of learning new material in the new unit, in relation to the control group who had no prior knowledge practice.

Because students in who received relevant practice on prior knowledge skills have to use those skills when practicing the new skills they are encountering in Accentuate the Negative, it seemed logical to hypothesize that those relevant prior skills would be answered more correctly at post-test than the subjects who received no practice on the skills before be assessed on the same material. For this analysis, a 2(Condition: Relevant Prior Skills, Irrelevant Prior Skills) x 3(Test: Pretest, Mid test, Posttest) ANOVA where the test variable represents students' scores at pretest, mid test, and posttest of the prior knowledge skills (and *not* the core skills as was the focus of the first ANOVA analysis) was run. The results can be seen below and are graphed in Figure 3 on the next page.

(This analysis was run two ways—either just excluding the students with missing Prior Skill Pre/Mid/Posttest data from Column E or excluding all participants with missing Prior Skill

Pre/Mid/Posttest data AND missing Core Skill Pre/Posttest data. Both ways yield similar results, so only the results from the latter are reported here because the stricter exclusion criteria yield more "favorable" results in the ANOVA above)

No Condition Main effect: F < 1

No Test Main effect : F(2, 192) = 1.58, ns

Condition x Test Interaction: F(2, 192) = 8.16, p < .001



Figure 3: Effectiveness of Mastery Learning on the retention of prior knowledge skills for Accentuate the Negative

Comparing the two conditions at pre-test will allow to us to see whether the two groups came in with the same skill level. They are, F(1, 192) = 2.05, *ns*. After two weeks of mastery-learning, the students receiving practice on prior knowledge skills scored higher on the mid test than students practicing irrelevant prior skills, F(1, 192) = 17.68, p < .001. Interestingly, the students practicing prior knowledge skills during the two weeks before the unit did not hold a statistically significant advantage over the students without practice at the posttest. This suggests

that students who did not receive an opportunity to re-master prior knowledge skills were forced to practice and re-learn these skills in order to succeed in the unit.

#### Part Two: The Counterbalance

#### **Mastery Learning – Proof of Concept**

As what done with the subjects from Accentuate the Negative, the same proof of concept to test if mastery works can be run on the subjects from Comparing and Scaling. As in the proof of concept section for Accentuate the Negative, the team looked at the pretest, mid test, and posttest of the prior knowledge skills, or the second part of the pretest and posttest assessments. This was achieved first by comparing changes in scores for the two conditions from prior knowledge skills pretest to prior knowledge skills posttest. Then the team looked at how mastery of the prior knowledge skill set was maintained throughout the course of learning new material in the new unit, in relation to the control group who had no prior knowledge practice. Again, it seemed logical to hypothesize that those relevant prior skills would be answered more correctly at post-test by the subjects who received an opportunity to re-master the skills than the subjects who received no practice on the skills before be assessed on the same material.

Of 130 students from two classrooms, 56 students had incomplete pretest/post-test data and were excluded from the analysis. As a result, 74 students were included in analysis, with 38 in the relevant prior skills condition (experimental) and 36 in the irrelevant skill condition (control)

There were a number of Core Skill pretest items and posttest items (#s 182548, 182549, 182550, 182555, 182556, 182557. All items appear on (both pretest and posttest) that appear to be

open response items and were not scored correct by ASSISTments. Therefore these items were not used when computing pretest and posttest scores for the core items.

2 (Condition: Experimental, Control) x 3(Test: Pretest on Prior Skills, Mid test on Prior Skills Posttest on Prior Skills)

Main effect of Test: F(2,124) = 11.39, p < .001.

Marginal Condition effect: F < 1

No Condition x Test Interaction: F(2, 124) = 1.65, p = .20



Figure 4: Effectiveness of Mastery Learning on the retention of prior knowledge skills for Comparing and Scaling

As shown in figure 4 above, the students practicing prior knowledge skills during the two weeks before the unit did not hold a statistically significant advantage over the students without practice at the posttest. This suggests that students who did not receive an opportunity to remaster prior knowledge skills were forced to practice and re-learn these skills in order to succeed in the unit. Interestingly, this is the same result that we found for Accentuate the Negative. This shows again that teachers are able to supplement the prior knowledge skill practice during the unit, even though the relevant skill students came into the unit stronger, which is reflected by the mid test score.

#### Conclusion

The study of the impact of prior knowledge skills on the retention of new mathematical content is far from over. With the data received thus far from Accentuate the Negative, Thinking with Mathematical Models and Comparing and Scaling, it is inconclusive as to whether or not practice on prior knowledge skills had an effect on students' retention of the new materials, although the concept of mastery learning has been show again as in the ARRS study.

Although various elements could have affected the study, the team hypothesized that the relative success from Accentuate the Negative was a result of prior knowledge skills which were decimal and fraction based as opposed to integer based, which allowed students in the experimental group an opportunity to improve and re-master key skills in their number sense, making the integer based math of Accentuate the Negative relatively simple. Unlike with Thinking with Mathematical Models, subjects in the experimental group for Accentuate the Negative received skill practice which was not supplemented by classroom instruction, which may have been the key to its success.

Even though the study of prior knowledge skills has yet to be conclusive, individual analysis of Accentuate the Negative, Thinking with Mathematical Models, and Comparing and Scaling have given researchers a perspective on aspects of the study to focus on for future success in analyzing the counterbalance data which will be matched up and analyzed further by Worcester Polytechnic Institute and the University of Illinois at Chicago.

#### Acknowledgements

The Interactive Qualifying Project (IQP) team would like to thank all of those involved in helping progress the success of this project, including the ASSISTments team, who continues to make improvements to the system and troubleshoot our problems. Additionally, the team would like to acknowledge our advisor Cristina Heffernan and Neil Heffernan, who both gave prompt and quality feedback and guidance for our project. The team would also like to thank Mary Fowler for her help in A and B terms this year, as well as Kevin Dietz and the team at the University of Illinois at Chicago, who helped with analysis and set up. Finally, the team would like to thank the teachers and students involved in this prior knowledge study, who were pivotal to the team's success on this project.

## References

- Carrier, Mark, and Harold Pashler. "The Influence of Retrieval on Retention." *Memory and Cognition* 20.6 (1992): 633-42. Print.
- Heffernan, N., Heffernan, C., Dietz, K., Soffer, D., Pellegrino, J. W., Goldman, S. R. & Dailey, M. (2012). Improving Mathematical Learning Outcomes Through Automatic Reassessment and Relearning. AERA 2012

ASSISTMENTS.ORG

# **Created Skill Builders**

# CMP Study 2011 – 2012

Cristina Heffernan, Alexandra Birch, Quinten Palmer, and Jeffrey Namias Academic Year 2011 – 2012

The documents below are the templates used for the creation of skill builders, which were used in the CMP pre-requisite study dated September 2011 to May 2012.

Skill	Class
Parallel and Perpendicular Lines	9th Grade

Mastery Problem Set	Number of Templates
#33910	10
Number to Master	Number of Attempts
3 in-a-row	

## <u>Templates</u>

One line passes through the points (6,2) and (8,-2).			
Another line passes through the points (7,3) and (9,-1).			
Are these lines parallel, perpendicular, the same line, or none of these answers?			
	Comment on this question		
Show me hint 1 of 4			
Select one:			
OParallel			
○Perpendicular			
○They are the same line			
○None of the above			
Submit Answer			

- The sets of points change every time, always being sets which are parallel
- There are 8 different, unique sets of values which give parallel lines
- The answers are multiple choice.

One line passes through the points (4,3) and (8,6).				
Another line passes through the points (-1,4) and (2,8).				
Are these lines parallel, perpendicular, the same line, or none of these?				
Show me hint 1 of 4	<u>Comment on this question</u>			
Select one:				
OPerpendicular				
○They are the same line				
○None of the above				
Submit Answer				

- $\circ$  The sets of points change every time, always being sets which are perpendicular
- The results are randomized and are independent
- The answers are multiple choice.

One line passes through the points (13,8.5) and (14,9).			
Another line passes through the points (5,11) and (6,14).			
Are these lines parallel, perpendicular, the same line, or none of these answers?			
	Comment on this question		
Show me hint 1 of 3			
Select one:			
○Parallel			
○Perpendicular			
○They are the same line			
○None of the above			
Submit Answer			

- The sets of points change every time, always being sets which are "none of the above"
- There are 16 different, unique sets of values which give slopes that are not the same or perpendicular
- The answers are multiple choice.



- The sets of points change every time, always being sets which are the same line.
- There are 16 different, unique sets of values which yield this answer
- The answers are multiple choice.



- $\circ$   $\;$  The slopes of the two lines and the y-intercept change every time
- The tow slopes will always be negative reciprocals of one another so the lines will always be perpendicular.
- The answers are multiple choice.

Are these two lines parallel, perpendicular, the same line, or none of these? 18x + 3y = 9 36x + 6y = 78	
	Comment on this question
Show me hint 1 of 4	
Select one:	
OParallel	
○Perpendicular	
⊙They are the same line	
○None of the above	
<u>Submit Answer</u>	

- The lines are in the form Ax + By = C
- The constants A, B and C are variablized, but it always works out so that the slopes are equal, but not the y-intercept. They are always parallel.
- When put into the form y = mx + b, m and b are always integers.
- The answer is multiple choice.
| Are these two lines parallel, perpendicular, the same<br>14x + 7y = 21<br>42x + 21y = 63 | line, or none of the above? |
|--|-----------------------------|
|  | Comment on this question    |
| Show me hint 1 of 4  |                             |
| Select one:  |                             |
| OParallel  |                             |
| OPerpendicular   |                             |
| ○The same line   |                             |
| ○None of the above   |                             |
| Submit Answer  |                             |
|  |                             |

- The lines are in the form Ax + By = C
- The constants A, B and C are variablized, but it always works out so that the slopes and the yintercept are always equal. The lines are the same.
- When put into the form y = mx + b, m and b are always integers.
- The answer is multiple choice.

Are these two lines parallel, perpendicular, the same line, or none of these? 12x + 2y = 8 21x + 3y = 12		
	Comment on this question	
Show me hint 1 of 3		
Select one:		
OParallel		
○Perpendicular		
○They are the same line		
○None of the above		
<u>Submit Answer</u>		

- The lines are in the form Ax + By = C
- The constants A, B and C are variablized, but it always works out so that the slopes are not the same or opposite reciprocals. The answer is always "none of the above"
- When put into the form y = mx + b, m and b are always integers.
- The answer is multiple choice.

Find the equation of a line that is parallel to y = 5x + 4 and passes through the point (-2, 0).		
Use x as the independant variable and y at the dependant variable. To answer the question, fill in the blank: y =		
,	Comment on this question	
<u>Show me hint 1 of 4</u> Type your answer below (mathematical expression):		
<u>Submit Answer</u>		

- The slope, the y-intercept, and the (x,y) coordinates are randomized.
  The slope is a positive integer between 2 and 7, while the y-intercept is a positive integer between 1 and 11. The x coordinate is always negative and the y coordinate is always positive
- The answer is algebraic 0

Find the equation of a line that is perpendicular to y = (1/6)x + 3 and passes through the point (1, -3).		
Use x for the independant variable and y for the dependant variable. Type the answer by filling in the blank		
y	Comment on this question	
Show me hint 1 of 4		
Type your answer below (mathematical expression):		
Submit Answer		

- $\circ$   $\;$  The slope, the y-intercept, and the (x,y) coordinates are randomized.
- The slope is one divided by a positive integer, while the y-intercept is a positive integer between 1 and 11. The x coordinate is always positive and the y coordinate is always negative
- The answer is algebraic

## Level 1 Skill Building – Points

Mastery Problem Set – Level 1 #33908	Number of Templates 4
Number to Master	Number of Attempts
3 in-a-row	

o **196885** 

o **196895** 

o **199578** 

o **198797** 

Level 2 Skill Building – Equations

Mastery Problem Set	Number of Templates
#33909	6
Number to Master	Number of Attempts
3 in-a-row	

· 197090

o **197094** 

o **198315** 

o **199447** 

o **19725**1

o 197542

Skill	Class
Percent Increase and Decrease	

Mastery Problem Set	Number of Templates		
		5	
Number to Master		Number of Attempts	
3 in-a-row			

### **Templates**

## 201854

The farmer brought 180 acorn squash to the market. When the day was over, he had 45% less acorn squash. How many acorn squash does the farmer have left?		
	Comment on this question	
Show me hint 1 of 3		
Type your answer below:		
Submit Answer		

- The total number of items, the item, and the percent decrease are variabilized. There are 10 different items that might be at a market.
- The answer always works out to an integer, so no decimals and no rounding necessary

There was a population of 360 beavers in a National Park. After a year, the population increased by 20%. How many beavers are there in the park now?			
Comment on this question			
Show me hint 1 of 3			
Type your answer below (mathematical expression):			
Submit Answer			

- The total population, the animal/plant, and the percent increase change every time. There are 10 different animals and plants.
- The answer always works out to an integer, so no decimals and no rounding necessary.

Radioshack is having a sale on computers. Betsy picks out a computer that was originally \$599.99 If the computer is 30% off, What is the final price of the computer? Round to the nearest penny.

	Comment on this
Show me hint 1 of 3	
Type your answer below:	
<u>Submit Answer</u>	

- The store name, person name, computer price, and percent decrease change every time.
- The computer price always ends in \$\_\_99.99
- The answer always works out to a decimal that needs to be rounded to the hundredths place

Over the course of a year, the population of opossums in Seatt What was the percent increase of the population of opossums? Express your answer as a percent.	le increased from 350000 to 402500.
	Comment on this question
Show me hint 1 of 3	
Type your answer below (mathematical expression):	
<u>Submit Answer</u>	

- The city name, item, and the initial and final populations change every time.
- The problem is looking for the percent increase, which always turns out to be a whole number percent all divides evenly.

James had a collection of 100 baseball cards at the beginning of the summer. After the summer, James had traded some of his baseball cards and now he has only 94 baseball cards. What is the percent decrease of his baseball card collection?

	Comment on this question
Show me hint 1 of 3	
Type your answer below (mathematical expression):	
Submit Answer	

- The type of collection, the boy's name, and the initial and final populations change every time.
- The problem is looking for the percent decrease, which always turns out to be a whole number percent all divides evenly.

Skill	Class
Point Plotting	

Mastery Problem Set	1	Number of Templates	
		10	
Number to Master	Ĩ	Number of Attempts	
3 in-a-row		10	

## **Templates**

## 208507

Mary has to plot 5 points for homework. Which is the point with the coordinates (-6,-7)?



### Show me hint 1 of 2

Select one:

◎A		
©В		
©c		
© D		
©E		

- There are 10 variable images that will change with the problem
- For this template the answer is always be B, but there are 10 unique plots for B
- The girl's name is also variablized



Joy has to plot 5 points for homework. Which is the point with the coordinates (3,5)?

## Show me hint 1 of 2

elect one:			
©A			
©В			
©c			
© D			
©E			
0			

- There are 10 variable images that will change with the problem
- For this template the answer is always be B, but there are 10 unique plots for B
- The girl's name is also variablized

Mary has to plot 5 points for homework. Which is the point with the coordinates (2,2)?



## Show me hint 1 of 2

elect one:			
<b>○</b> A			
©в			
©c			
© D			
©Е			

- There are 10 variable images that will change with the problem
- For this template the answer is always be C, but there are 10 unique plots for C
- The girl's name is also variablized

Anna has to plot 5 points for homework. Which is the point with the coordinates (6,-7)?



## Show me hint 1 of 2

ct one:			
A			
B			
C			
D			
DE			
€	_		

- There are 10 variable images that will change with the problem
- For this template the answer is always be D, but there are 10 unique plots for D
- The girl's name is also variablized

Kate has to plot 5 points for homework. Which is the point with the coordinates (6,3)?



## Show me hint 1 of 2

Select one:			
© A			
©В			
©c			
© D			
©Е			
	N.		

- There are 10 variable images that will change with the problem
- For this template the answer is always be E, but there are 10 unique plots for E
- o The girl's name is also variablized

What are the coordinates of Point A? Use the form (x,y)



Show me hint 1 of 2

Type your answer below (mathematical expression):

### Submit Answer

- This is a template only for point A
- There are 10 unique, varibilized images with 10 unique coordinates for A
- The answer is Fill-in

What are the coordinates of Point B? Use the form (x,y)



### Show me hint 1 of 2

Type your answer below (mathematical expression):

### Submit Answer

- This is a template only for point B
- There are 10 unique, varibilized images with 10 unique coordinates for B
- o The answer is Fill-in

What are the coordinates of Point C? Use the form (x,y)





Type your answer below (mathematical expression):

- This is a template only for point C
- There are 10 unique, varibilized images with 10 unique coordinates for C
- The answer is Fill-in

What are the coordinates of Point D? Use the form (x,y)



Show me hint 1 of 2

Type your answer below (mathematical expression):

- This is a template only for point D
- There are 10 unique, varibilized images with 10 unique coordinates for D
- The answer is Fill-in

What are the coordinates of Point E? Use the form (x,y)



### Show me hint 1 of 2

Type your answer below (mathematical expression):

- This is a template only for point E
- There are 10 unique, varibilized images with 10 unique coordinates for E
- The answer is Fill-in

Skill	Class
Elapsed Time – Level 2 Skill Building	

Mastery Problem Set	Number of Templates	
37824	4	
Number to Master	Number of Attempts	
3 in-a-row		

## **Templates**

When Mark last checked his watch it was 6:00 pm. It is now 8:19 pm. How much time has elapsed?				
Answer:: (hours:minutes)				
	Comment on this question			
Show me hint 1 of 3				
Type your answer below:				
<u>Submit Answer</u>				

- o The names are variablized, there are 10 different names
- The first time is always on the hour, so the student must count up the correct number of hours and then add the minutes
- The answer is fill in

When Beth last checked the clock it was 1:17 pm. It is now 4:00 pm. How much time has elapsed?			
Answer:: (hours:minutes)			
	Comment on this question		
Show me hint 1 of 3			
Type your answer below:			
Submit Answer			

- The names are variablized, there are 10 different names
- The second time is always on the hour, so the student must count up the minutes and then count up the hours
- The answer is fill in

When Lynn last checked the clock it was It is now 8:20 pm. How much time has elapsed?	5:36 pm.
Answer:: (hours:minutes)	
	Comment on this question
Show me hint 1 of 3	
Type your answer below:	
Submit Answer	

- The names are variablized, there are 10 different names
- The student must count up the minutes, then the hours, then add the remaining minutes to the first set of minutes but the minutes are always less than 60
- The answer is fill in

When Greg last checked the clock it was 5:19 pm. It is now 9:50 pm. How much time has elapsed?	
Answer:: (hours:minutes)	
	Comment on this question
Show me hint 1 of 3	
ype your answer below:	
<u>Submit Answer</u>	

- o The names are variablized, there are 10 different names
- The student must count up the minutes, then the hours, then add the remaining minutes to the first set of minutes but the total minutes are always greater than 60, so the student must subtract out the full hour from the minutes
- The answer is fill in

Skill	Class
Finding Max and Min from a Quadratic Equation	

Mastery Problem Set #196591	Number of Templates 1
Number to Master 3 in-a-row	Number of Attempts

## <u>Template</u>

Find the maximum or minimum of this quadratic equation: $y = -27x^2 - 216x - 220$	
	Comment on this question
Show me hint 1 of 4	
Type your answer below:	
<u>Submit Answer</u>	

- There are 8 different combinations of positive/negative signs on A, B, and C.
  - A is a multiple of 3 ranging from -33 to 33 (randomized)
  - B is a positive or negative multiple of 2 times A times 2 thru 5 (randomized)
  - C is a number ranging from -255 to 255
- The solution method used in the hints is the formula for the x component of the vertex, x = -b/2a
- The answers fill in.

Skill	Class
Finding Max and Min from a Quadratic Equation	

Mastery Problem Set #197988	Number of Templates 1
Number to Master 3 in-a-row	Number of Attempts

## <u>Template</u>

Find the maximum or minimum of this quadratic eq	uation: $y = x^2 + 6x + 79$
	Comment on this question
Show me hint 1 of 3	
Type your answer below:	
<u>Submit Answer</u>	

- A is 1 to enable completing the square without requisite complicated factoring skills.
- B is a multiple of 2 from 4 to 16 (randomized). B can be positive or negative.
- C is a random number from 0 to 23 plus a static 65 minus the value of B. The static 65 is added to ensure that C is larger than B squared (largest B is 16, squared is 64).
- The solution method used in the hints is completing the square.
- $\circ$   $\;$  The answers fill in.

Skill	Class
Addition and	
Subtraction	
Fractions	

Mastery Problem Set 38743	Number of Templates 17
Number to Master 3 in-a-row	Number of Attempts

<u>Templates:</u>

 ASSISTment ID: 219295
 Comment on this question

 Find the sum:
  $3\frac{4}{5} + 2\frac{4}{5}$  

 Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)

 Type your answer below:

 Submit Answer
 Show Hint 1 of 3

- The addition of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a random number from 1 to 10 added to a base of 1.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a random number from 1 to 10 added to a base of 1.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is the same value as the first denominator.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a mixed number in fill in format.

ASSISTment ID: 224027 Find the sum:	Comment on this question
$6\frac{5}{6} + 9\frac{5}{18}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number and (example 3 5/8)	(example 2/7) or a d the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The addition of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a random number from 1 to 10 added to a base of 1.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a random number from 1 to 10 added to a base of 1.
- The second numerator on the right is a number from 1 to 13, excluding 12.
- The second denominator on the right is a number from the set of 8,6,12, 10,18, 14,2,18,30,22, and 36.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a mixed number in fill in format.

Comment on this question
(example 2/7) or a I the fraction

- The addition of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a random number from 1 to 10 added to a base of 1.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a random number from 1 to 10 added to a base of 1.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is a number from the set of 2 to 12, excluding 6 and 8.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a mixed number in fill in format.

ASSISTment ID: 229270	Comment on this question
Find the sum:	
$3\frac{5}{12} + 9\frac{1}{10}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number an (example 3 5/8)	<u>n</u> (example 2/7) or a nd the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The addition of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a random number from 1 to 10 added to a base of 1.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 4 to 12, excluding 5, 7, and 11.
- The second integer on the right is a random number from 1 to 10 added to a base of 1.
- The second numerator on the right is a number from 1 to 11, excluding 6 and 10.
- The second denominator on the right is a number from the set of 4 to 12, excluding 5, 7, and 11.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a mixed number in fill in format.

ASSISTment ID: 224052 Find the difference:	Comment on this question	
$9\frac{7}{8} - 3\frac{3}{8}$		
Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)		
Type your answer below:		
Submit Answer Show Hint 1 of 3		

- The subtraction of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a number from 1 to 12.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a number from 1 to 11.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is the same value as the first denominator.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a mixed number in fill in format.

ASSISTment ID: 231574 Find the difference:	Comment on this question	
5 - $1\frac{2}{5}$		
Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)		
Type your answer below:          Submit Answer       Show Hint 1 of 3		

- The subtraction of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a number from 1 to 12.
- The second integer on the right is a number from 1 to 11.
- The numerator on the right is a number from 1 to 11.
- The denominator on the right is a number within a large set from 2 to 12.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 224053 Find the difference:	Comment on this question	
$10\frac{2}{7} - 6\frac{5}{14}$		
Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)		
Type your answer below:		
Submit Answer Show Hint 1 of 3		

- The subtraction of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a number from 1 to 12.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a number from 1 to 11.
- The second numerator on the right is an odd number between(inclusive) 1 and 13.
- The second denominator on the right is a number from the set of 8,6,12, 10,18, 14,2,18,30,22, and 36.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 224054 Find the difference:	Comment on this question
$8\frac{1}{12} - 4\frac{6}{11}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number and (example 3 5/8)	(example 2/7) or a I the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The subtraction of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a number from 1 to 12.
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second integer on the right is a number from 1 to 11.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is a number within a set from 3 to 11, excluding 6 and 8.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 229272	Comment on this question
Find the difference:	
$9^{-}_{-}$ - 2 $^{-}_{-}$	
6 9	
	( , , , , , , , , , , , , , , , , , , ,
Answers must be in the form of a <u>reduced proper fraction</u>	<u>n</u> (example 2/7) or a nd the fraction
(example 3 5/8)	
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The subtraction of mixed numbers in the expression above is completely variabilized:
- The first integer on the left is a number from 1 to 12.
- The first numerator on the left is a number from 1 to 11, excluding 6 and 10.
- The first denominator on the left is a number within a large set from 4 to 12, excluding 5, 7, and 11.
- The second integer on the right is a number from 1 to 11.
- The second numerator on the right is a number from 1 to 11, excluding 10.
- The second denominator on the right is a number within a set from 4 to 12, excluding 5. 7, and 11.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 208868 Find the sum:	Comment on this question
$\frac{2}{7} + \frac{4}{7}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number an (example 3 5/8)	(example 2/7) or a d the fraction
Type your answer below:           Submit Answer         Show Hint 1 of 3	

- The addition of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is the same value as the first denominator.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 208856 Find the sum:	Comment on this question
$\frac{9}{11} + \frac{3}{22}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number and (example 3 5/8)	(example 2/7) or a I the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The addition of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.

- The second numerator on the right is an odd number between(inclusive) 1 and 13.
- The second denominator on the right is a number from the set of 8,6,12, 10,18, 14,2,18,30,22, and 36.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 208834	Comment on this question
Find the sum:	
3 1	
5 + 2	
Answers must be in the form of a <i>reduced proper fraction</i>	(example 2/7) or a
mixed number with a space between the whole number and	the fraction
(example 3 5/8)	
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The addition of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is a number from 3 to 11, excluding 6 and 8.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.

ASSISTment ID: 224085	Comment on this question
Find the sum:	
<u>8</u> <u>+</u> <u>5</u>	
9 ' 6	
Answers must be in the form of a <u>reduced proper</u>	<u>fraction</u> (example 2/7) or a
<u>mixed number</u> with a space between the whole nu	umber and the fraction
(example 5 5/8)	
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The addition of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 and 11, excluding 6 and 10.
- The first denominator on the left is a number within a large set from 4 to 12, excluding 5, 7, and 11.
- The second numerator on the right is a number from 1 and 11, excluding 6 and 10.
- The second denominator on the right is a number from 4 to 12, excluding 5, 7, and 11.
- Sets for the denominators and the numerators link together, so that the addition expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction or mixed number in fill in format.



- The subtraction of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second numerator on the right is a number from 1 and 11.
- The second denominator on the right is the same value as the first denominator.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction in fill in format.

ASSISTment ID: 217366 Find the difference:	Comment on this question	
$\frac{1}{10} - \frac{1}{30}$		
Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)		
Type your answer below:		
Submit Answer Show Hint 1 of 3		

- The subtraction of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.

- The second numerator on the right is an odd number between(inclusive) 1 and 13.
- The second denominator on the right is a number from the set of 8,6,12, 10,18, 14,2,18,30,22, and 36.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction in fill in format.

ASSISTment ID: 217373	Comment on this question
Find the difference:	
$\frac{5}{8} - \frac{1}{9}$	
Answers must be in the form of a <u>reduced proper fraction</u> <u>mixed number</u> with a space between the whole number and (example 3 5/8)	(example 2/7) or a d the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The subtraction of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11.
- The first denominator on the left is a number within a large set from 2 to 12.
- The second numerator on the right is a number from 1 to 11.
- The second denominator on the right is a number within a large set from 2 to 12.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction in fill in format.

ASSISTment ID: 229256	Comment on this question
Find the difference:	
5 7	
6 10	
Answers must be in the form of a <i>reduced proper fraction</i>	(example 2/7) or a
<u>mixed number</u> with a space between the whole number an (example 3.5/8)	d the fraction
Type your answer below:	
Submit Answer Show Hint 1 of 3	

- The subtraction of proper fractions in the expression above is completely variabilized:
- The first numerator on the left is a number from 1 to 11, excluding 6 and 10.
- The first denominator on the left is a number from 4 to 12, excluding 5, 7, and 11.
- The second numerator on the right is a number from 1 to 11, excluding 6 and 10.
- The second denominator on the right is a number from 4 to 12, excluding 5, 7, and 11.
- Sets for the denominators and the numerators link together, so that the subtraction expression produced can be controlled.
- The fractions are always in reduced/simplest form and there are no cancellations.
- The answer is a proper fraction in fill in format.
- Adding and Subtracting Fractions THE SKILL BUILDING SET 38743

5 Adding Mixed Numbers with like denominators - 219295

10 Adding Mixed Numbers with related denominators - 224027

10 Adding Mixed Numbers with coprime denominators - 224030

20 Adding Mixed Numbers with non-coprime denominators - 229270

10 Subtracting Mixed Numbers with like denominators - 224052

10 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

15 Subtracting Mixed Numbers with related denominators - 224053

10 Subtracting Mixed Numbers with coprime denominators - 224054

20 Subtracting Mixed Numbers with non-coprime denominators -229272

5 Adding proper fractions with like denominators - 208868

10 Adding proper fractions with related denominators - 208856

10 Adding proper fractions with coprime denominators - 208834

20 Adding proper fractions with non-coprime denominators - 224085

5 Subtracting proper fractions with like denominators - 217361

10 Subtracting proper fractions with related denominators - 217366

10 Subtracting proper fractions with coprime denominators - 217373 20 Subtracting proper fractions with non-coprime denominators -229256

Problem Set #: 38711 Proper 1.1: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding like 200 Adding proper fractions with like denominators - 208868

Problem Set #: 38712

Proper 1.2: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding like and related

100 Adding proper fractions with related denominators - 208856

100 Adding proper fractions with like denominators - 208868

Problem Set #: 38714 Proper 1.3: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding coprime and related 100 Adding proper fractions with coprime denominators - 208834 100 Adding proper fractions with related denominators - 208856

Problem Set #: 38715

Proper 1.4: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding difficult 200 Adding proper fractions with non-coprime denominators - 224085

Problem Set #: 38720

Proper 1.5: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding 20 Adding proper fractions with like denominators - 208868
50 Adding proper fractions with related denominators - 208856
50 Adding proper fractions with coprime denominators - 208834
80 Adding proper fractions with non-coprime denominators - 224085

Problem Set #: 38716 Proper 2.1: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction like 200 Subtracting proper fractions with like denominators - 217361

Problem Set #: 38717 Proper 2.2: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction like and related 100 Subtracting proper fractions with related denominators - 217366 100 Subtracting proper fractions with like denominators - 217361

Problem Set #: 38718 Proper 2.3: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction coprime and related 100 Subtracting proper fractions with coprime denominators - 217373 100 Subtracting proper fractions with related denominators - 217366 Problem Set #: 38719 Proper 2.4: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction difficult 200 Subtracting proper fractions with non-coprime denominators -229256

Problem Set #: 38722

Proper 2.5: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction
20 Subtracting proper fractions with like denominators - 217361
50 Subtracting proper fractions with related denominators - 217366
50 Subtracting proper fractions with coprime denominators - 217373
80 Subtracting proper fractions with non-coprime denominators - 229256

Problem Set #: 38721

Proper 3.1: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, like 100, Adding proper fractions with like denominators - 208868 100, Subtracting proper fractions with like denominators - 217361

Problem Set #: 38723

Proper 3.2: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, like and related 50, Adding proper fractions with related denominators - 208856

50, Adding proper fractions with like denominators - 208868

50, Subtracting proper fractions with related denominators - 217366

50, Subtracting proper fractions with like denominators - 217361

Problem Set #: 38724

Proper 3.3: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, coprime and related

50, Adding proper fractions with coprime denominators - 208834

50, Adding proper fractions with related denominators - 208856

50, Subtracting proper fractions with coprime denominators - 217373

50, Subtracting proper fractions with related denominators - 217366

Problem Set #: 38725

Proper 3.4: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, difficult

100, Adding proper fractions with non-coprime denominators - 224085

100, Subtracting proper fractions with non-coprime denominators -229256

Problem Set #: 38726

Proper 3.5: Adding and Subtracting Fractions - LEVELED SKILL BUILDING proper

10, Adding proper fractions with like denominators - 208868

25, Adding proper fractions with related denominators - 208856

25, Adding proper fractions with coprime denominators - 208834

40, Adding proper fractions with non-coprime denominators - 224085

10, Subtracting proper fractions with like denominators - 217361

25, Subtracting proper fractions with related denominators - 217366

25, Subtracting proper fractions with coprime denominators - 21737340, Subtracting proper fractions with non-coprime denominators -229256

Problem Set #: 38729 Mixed 1.6: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding like mixed 200 Adding Mixed Numbers with like denominators - 219295

Problem Set #: 38727 Mixed 1.7: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding like and related mixed 100 Adding Mixed Numbers with related denominators - 224027 100 Adding Mixed Numbers with like denominators - 219295

Problem Set #: 38728 Mixed 1.8: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding coprime and related mixed 100 Adding Mixed Numbers with coprime denominators - 224030 100 Adding Mixed Numbers with related denominators - 224027

Problem Set #: 38731 Mixed 1.9: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding difficult mixed 200 Adding Mixed Numbers with non-coprime denominators - 229270

Problem Set #: 38730
Mixed 1.10: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, adding mixed
20 Adding Mixed Numbers with like denominators - 219295
50 Adding Mixed Numbers with related denominators - 224027
50 Adding Mixed Numbers with coprime denominators - 224030
80 Adding Mixed Numbers with non-coprime denominators - 229270

Problem Set #: 38734

Mixed 2.6: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction like mixed

160 Subtracting Mixed Numbers with like denominators - 22405240 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

Problem Set #: 38732
Mixed 2.7: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction like and related mixed
100 Subtracting Mixed Numbers with related denominators - 224053
70 Subtracting Mixed Numbers with like denominators - 224052
30 Subtracting with Whole number template 231574 subtracting a mixed number from a whole

number.

Problem Set #: 38733 Mixed 2.8: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction coprime and related mixed 100 Subtracting Mixed Numbers with coprime denominators - 224054 100 Subtracting Mixed Numbers with related denominators - 224053

Problem Set #: 39736

Mixed 2.9: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction difficult mixed

200 Subtracting Mixed Numbers with non-coprime denominators -229272

Problem Set #: 38735

Mixed 2.10: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, subtraction mixed

20 Subtracting Mixed Numbers with like denominators - 224052

10 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

50 Subtracting Mixed Numbers with related denominators - 224053

50 Subtracting Mixed Numbers with coprime denominators - 224054

70 Subtracting Mixed Numbers with non-coprime denominators -229272

Problem Set #: 38739

Mixed 3.6: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, like mixed 60 Adding Mixed Numbers with like denominators - 219295

80 Subtracting Mixed Numbers with like denominators - 224052

60 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

Problem Set #: 38737

Mixed 3.7: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, like and related mixed

40 Adding Mixed Numbers with related denominators - 224027

40 Adding Mixed Numbers with like denominators - 219295

40 Subtracting Mixed Numbers with related denominators - 224053

40 Subtracting Mixed Numbers with like denominators - 224052

40 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

Problem Set #: 38738

Mixed 3.8: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, coprime and related mixed

50 Adding Mixed Numbers with coprime denominators - 224030

50 Adding Mixed Numbers with related denominators - 224027

50 Subtracting Mixed Numbers with coprime denominators - 224054

50 Subtracting Mixed Numbers with related denominators - 224053

Problem Set #: 38744

Mixed 3.9: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, difficult mixed 100 Adding Mixed Numbers with non-coprime denominators - 229270

100 Subtracting Mixed Numbers with non-coprime denominators -229272

Problem Set #: 38740

Mixed 3.10: Adding and Subtracting Fractions - LEVELED SKILL BUILDING, mixed

10 Adding Mixed Numbers with like denominators - 219295

25 Adding Mixed Numbers with related denominators - 224027

25 Adding Mixed Numbers with coprime denominators - 224030

40 Adding Mixed Numbers with non-coprime denominators - 229270

10 Subtracting Mixed Numbers with like denominators - 224052

10 Subtracting with Whole number template 231574 subtracting a mixed number from a whole number.

25 Subtracting Mixed Numbers with related denominators - 224053

25 Subtracting Mixed Numbers with coprime denominators - 224054

30 Subtracting Mixed Numbers with non-coprime denominators -229272

Skill	Class
Fraction Of	

Mastery Problem Set	Number of Templates
34259	9
Number to Master	Number of Attempts
3 in-a-row	

#### Templates

#### 196524

ASSISTment ID: 196524	Comment on this question	
Last year, Caroline ran a race in 21 minutes. This year she is		
stronger so her time is 2/6 less. How much less is her time?		
Submit Answer Show Hint 1 of 3		

- The duration of the race ranges from 12 to 30 and is always divisible by 3.
- The fraction if always 2/6 and simplifies to 1/3.
- The answer will always be a whole number.
- Answer type is Fill In



- The number of cookies ranges from 28 to 112.
- The fraction is always 3/7.
- The answer is always a whole number.
- Answer type is Fill In

ASSISTment ID: 196602	Comment on this question			
Andrew has 99 problems for homework. He	e has done 1/9 of his			
homework. How many problems has Andrew done?				
Submit Answer Show Hint 1 of 2				

- The number of problems ranges from 1 to 200.
- The fraction ranges from 1/1 to 1/10, all 1/number
- The answer is always a whole number.
- Answer type is Fill In

ASSISTment ID: 196619	Comment on this question		
A silo holds 345 tons of grain.			
Of the total amount of grain, the vermin co	nsume: $\frac{1}{5}$		
How many tons of grain was eaten from the silo?			
Submit Answer Show Hint 1 of 3			

- The number of problems amount of grain ranges from 4 to 1010.
- The fraction ranges from 1/10 to 3/4, and will always be in it's simplest form.
- The answer is always a whole number.
- Answer type is Fill In

ASSISTment ID: 194819	Comment on this question			
Sarah is collecting postcards. She wants to collect 69 postcards by the end of the day. She has collected 2/3 of the postcards she wants to. How many postcards has she				
collected?				
Submit Answer Show Hint 1 of 3				

- The number of postcards ranges from 30 to 210.
- The fraction ranges from 2/7 to 2/3, all 2 divided by and odd number between 3 and 7
- The answer is always a whole number.
- Answer type is Fill In

ASSISTment ID: 194310

Comment on this question

John is buying food at the grocery store. He has made a list of 78 items that he needs to buy. He has bought 1/6 of the items. How many items has he bought?

Submit Answer Show Hint 1 of 2

- The number of items ranges from 2 to 126.
- The fraction ranges from 1/2 to 1/7, ranging the denominator from 2 to 7
- Answer type is always Fill In

# 200023

ASSISTment ID: 200023	Comment on this question		
Lindsey bought a bag of candy with 90 pieces. She gave away			
2/9 of her candy to Nick. How many pieces did Nick get?			
Submit Answer Show Hint 1 of 3			

- The number of pieces of candy ranges from 30 to 210
- The fraction ranges from 2/7 to 2/3, all 2 divided by and odd number between 3 and 7
- The answer is always a whole number.
- Answer type is Fill In

# 194431

- \*
- The amount of candy ranges from 30 to 650.
- The fraction ranges from 2/13 to 2/3, all 2 divided by and odd number between 3 and 13
- The answer is always a whole number.
- Answer type is always Fill In



- The number of problems ranges from 1 to 200.
- The fraction ranges from 1/1 to 1/10, all 1/number
- The answer is always a whole number.
- Answer type is always Fill In



- The fraction ranges from 1/13 to 2/3 and is always in simplest form.
- The number to get a fraction of ranges from 3 to 143.
- The answer is always a whole number.
- Answer type is always Fill In

ASSISTment ID: 200020	Comment on this question
Find $\frac{2}{3}$ of 48.	
Submit Answer Show Hint 1 of 3	

- The fraction will always be in simplest form.
- The answer is always a whole number.
- Answer type is always Fill In

Skill	Class
Reflection	

Mastery Problem Set	Number of Templates 2
Number to Master 3 in-a-row	Number of Attempts

Templates



- The triangle has 5 different locations (the same as the Rotation and Translation triangle problems).
- The reflection is across the x or y axis.
- The question will ask about the position of A, B, or C.
- Answer Type is Fill In



- The quadrilateral has 4 different locations (the same as the Rotation and Translation quadrilateral problems).
- The reflection is either across the x or y axis.
- The question will ask about the position of A, B, C, or D.
- Answer Type is Fill In

Skill	Class
Rotation	

Mastery Problem Set	Number of Templates 2
Number to Master 3 in-a-row	Number of Attempts

Templates



- The triangle has 5 different locations (the same as the Reflection and Translation triangle problems).
- The rotation is either 90 degrees or 180 degrees clockwise.
- The question will ask about the position of A, B, or C.
- Answer Type is Fill In



- The quadrilateral has 4 different locations (the same as the Reflection and Translation quadrilateral problems).
- The rotation is either 90 degrees or 180 degrees clockwise.
- The question will ask about the position of A, B, C, or D.
- Answer Type is Fill In

Skill	Class
Translation	

Mastery Problem Set	Number of Templates 2
Number to Master 3 in-a-row	Number of Attempts

Templates 198722



- The triangle has 5 different locations (the same as the Reflection and Rotation triangle problems).
- The translation ranges from 1-9 up and 1-7 left.
- The question will ask about the position of A, B, or C.
- Answer Type is Fill In



- The quadrilateral has 4 different locations (the same as the Reflection and Rotation quadrilateral problems).
- The translation ranges from 1-9 up and 1-7 left.
- The question will ask about the position of A, B, C, or D.
- Answer Type is Fill In

	ASSISTMENT deadline	On-Topic Skill Sets x10 (By General Content Skill Name)	On-Topic Skill Sets x10 (By Problem Set #) Status	Off-Topic Skill Sets x10 (By General Content Skill Name)	Off-Topic Skill Sets x10 (By Problem Set #) Status
Prerequisite Test Pre Accent neg test Mid test - just skills.	Nov 28th		37157 37103		
End of unit Accent neg test Accentuate the Negative Accentuate the Negative	12/7/201 12/7/201 12/7/201 12/7/201 12/7/201 12/7/201 12/7/201 12/7/201 12/7/201	1 Ordering Positive Decimals 1 Adding and Subtracting Proper Fractions 1 Adding and Subtracting Mixed Numbers 1 Addition of Positive Decimals 1 Subtraction of Positive Decimals 1 Point Plotting 1 Multiplication of Fractions 1 Division of Fractions 1 Multiplication of Positive Decimals 1 Division of Positive Decimals	37174 6040 37971 37981 36094 36551 35008 11829 14211 34666 16322	Mean Median Median Level 1 Box and Whiskers* Counting Methods* Range Range Level 1 Acute, Obtuse and Right Angles Third Angle of a Triangle Properties of Solids* Elapsed Time* Polygons 5 or more* Properties of quadrilaterals*	19362 21943 21947 26902 15528 8979 14157 9245 21257 6150 37824 24173 23755
Prerequisite Test Pre Test Mid Test Post Test	<u>n/a</u>		38315 38162 38314 27556		
Filling and Wrapping Filling and Wrapping		Multiplication and Division of Decimals Unit Conversion within a System Area of Rectangles Perimeter of a Polygon Multiplication of Fractions Division of Fractions Properties and Classifications of a Circle Finding Fractions and Ratios Scale Factor Similar Figures	2/456 16322 9056 10710 10766 11829 14211 22457 35610 NONE 9998	Mean Median Level 1 Box and Whiskers* Counting Methods* Range Range Level 1 Elapsed Time	19362 21943 21947 26902 15528 8979 14157 37824
Prerequisite Test Pretest Midtest Beattast	<u>n/a</u>		37082 38165 38166 29470		
Thinking with Math Models Thinking with Math Models		Addition and Subtraction of Fractions Addition and Subtraction of integers Multiplication Fractions Multiplication and division Integers Writing linear equation from ordered pairs Writing linear equation from slope and y- intercept Recognizing Linear Pattern Finding y-intercept from a Linear Equation Division of Fractions	37994 11898 37091 11899 10597 34265 12449 8752 9180 14211	Mean, Level 1 Median Elapsed Time Box and Whiskers Counting Methods Polygons 5 or more Range Properties of quadrilaterals Circumference Area of a Circle	17470 21943 37824 26902 15528 24173 8979 23755 10767 10762
<u>Prerequisite Test</u>	<u>n/a</u>		38309 38308		
Moving Straight Ahead Moving Straight Ahead		Interpreting Coordinate Graphs Point Plotting Multiplication of Decimals Division of Decimals Addition and Subtraction Integers Commutative and Distributive Property Distributive Property Multiplication and Division Integers Parallel and Perpendicular Lines Percent of Increase and Decrease	37083 NONE 35008 34666 16322 11898 13718 10195 11899 33910 34196	Median Counting Methods* Range Acute, Obtuse and Right Angles Third Angle of a Triangle Properties of Solids* Elapsed Time* Polygons 5 or more* Properties of quadrilaterals*	21943 15528 8979 9245 21257 6150 37824 24173 23755
Preteguisite Test Pretest Mid Test Post Test	<u>n/a</u>		37693 37655 37653		
Comparing and Scaling Comparing and Scaling		Conversion of Fractions Decimals Percents Percent of a Number Equivalent Fractions Equation solving simple Greatest Common Factor Prime factorization Divisibility Rules	6849 37146 35085 8744 6921 17316 8741	Mean Median Third Angle of a Triangle Box and Whiskers Counting Methods Range Acute, Obtuse and Right Angles	19362 21943 21257 26902 15528 8979 9245
Prerequisite Test Pretest Midtest Pacttast	<u>n/a</u>		37084 38531 38532		
Looking for Pythagoras Looking for Pythagoras Looking for Pythagoras Looking for Pythagoras Looking for Pythagoras Looking for Pythagoras		Point plotting Area of irregular figures Ordering fractions both ways Ordering integers Perpendicular lines and parallel <i>Propertice and classification of triangles</i>	35008 35008 10765 6038 5956 33910	Mean, Level 1 Median Elapsed Time Counting Methods Range	17470 21943 37824 15528 8979

Thinking with Mathematical Models Relevant Pre-requisites for each Core Problem

- 1. Multiplication and Division of Integers (prob. 17)
- 2. Recognizing Linear Pattern (prob. 21)
- 3. N/A (Why isn't Point Plotting a Pre-Req?)
- 4. Not sure?
- 5. Writing an equation from Slope and Y-intercept (prob. 20)
- 6. Addition & Subtraction / Multiplication & Division of Integers and Fractions (probs. 14-17)
- 7. Writing a Linear Equation from Ordered Pairs (prob. 18)
- 8. Writing a Linear Equation from a Situation (prob. 19)
- 9. Addition & Subtraction / Multiplication & Division of Integers and Fractions (probs. 14-17)
- 10. Multiplication and Division of Integers (prob. 17)
- 11. Multiplication and Division of Integers (prob. 17)
- 12. Not sure? Multiplication and Division of Integers (prob. 17)
- 13. Recognizing Linear Pattern (prob. 21) Multiplication and Division of Integers (prob. 17)

Looking for Pythagoras Relevant Pre-requisites for each Core Problem

- 1. Point Plotting (prob. 17)
- 2. Point Plotting (prob. 17)
- 3. Point Plotting (prob. 17), Parallel and Perpendicular lines (prob. 21)
- 4. Point Plotting (prob. 17) Properties and classifications of triangles
- 5. Point Plotting (prob. 17) Area of Irregular Figures (prob. 18)
- 6. Point Plotting (prob. 17)
- 7. Ordering Integers (prob. 20)
- 8. Ordering Integers (prob. 20)
- 9. Point Plotting (prob. 17)
- 10. Ordering Integers (prob. 20), Ordering Decimals
- 11. Properties and classifications of triangles
- 12. Point Plotting (prob. 17)
- 13. Properties and classifications of triangles
- 14. Point Plotting (prob. 17)
- 15. Properties and classifications of triangles
- 16. None?

Comparing and Scaling Relevant Pre-requisites for each Core Problem

- 1. Equivalent Fractions (prob. 26)
- 2. None
- 3. Conversions of Fractions to Decimals Percents (prob. 24) Percent of a Number (prob. 25)
- 4. Equivalent Fractions (prob. 26)
- 5. None
- 6. Equivalent Fractions (prob. 26)
- 7. Equivalent Fractions (prob. 26)
- 8. Equivalent Fractions (prob. 26)
- 9. Equivalent Fractions (prob. 26)
- 10. Equivalent Fractions (prob. 26)
- 11. Conversions of Fractions to Decimals Percents (prob. 24) Percent of a Number (prob. 25)
- 12. None
- 13. None
- 14. Conversions of Fractions to Decimals Percents (prob. 24)
- 15. Conversions of Fractions to Decimals Percents (prob. 24)
- 16. Conversions of Fractions to Decimals Percents (prob. 24)
- 17. Equivalent Fractions (prob. 26)
- 18. Equivalent Fractions (prob. 26)
- 19. None
- 20. Equivalent Fractions (prob. 26)
- 21. Equivalent Fractions (prob. 26)
- 22. Equivalent Fractions (prob. 26)
- 23. Equivalent Fractions (prob. 26)

Accentuate the Negative Relevant Pre-requisites for each Core Problem

1. N/A (Why isn't Adding and Subtracting Integers a Pre-Req?)

Question -- Integer work instead of fraction and decimal work?

ASSISTMENTS.ORG

# Accentuate the Negative

### Appendix of Student Work

Cristina Heffernan, Alexandra Birch, Quinten Palmer and Jeffrey Namias 3/28/2012

This is a document of the Pretest, Posttest, Mid test, and all of the pre-requisite and off-topic skill builders used in the CMP Study. Academic Year 2011 – 2012.

Problem Set "Pre Test for Accentuate the Negative from WPI" id:[37157]

**1)** Assistment #34509 "34509 - Subtraction - Integers " What is (-21) - (-12)?

2) Assistment #46611 "46611 - Addition-Integers: negative + positive" What is (-6) + 4?

3) Assistment #50845 "50845 - Addition-Integers: negative + negative" What is (-4) + (-15)?

4) Assistment #34758 ''34758 - Division - Integers'' What is the value of p that makes the statement true? -136 / p = -8

5) Assistment #34775 "34775 - Division - Integers" What is 40 ÷ (-10)?

6) Assistment #34682 "34682 - Multiplication of Integers" What is 7 \* (-2)?

7) Assistment #38613 ''38613 - Ordering''

Arrange these numbers from least to greatest. -12.8, 1/2, 3.8, -7/2

0 3.8, -12.8, 1/2, -7/2

-12.8, -7/2, 3.8, 1/2

0 -7/2, -12.8, 1/2, 3.8

0 -12.8, -7/2, 1/2, 3.8

8) Assistment #27875 ''27875 - 12315 - Accentuate the Negative: Inv 4, 2a Hints - Morph1'' Evaluate the expression below:

3 + ((-7) \* 2) - 8

9) Assistment #27977 "27977 - 12315 - Accentuate the Negative: Inv 4, 2a Hints - Morph2" Evaluate the expression below:

 $2 + 3^2 - 8 * 4 - (-7)$ 

**10)** Assistment #37207 ''37207 - Exponents, Order of operations'' What is the value of this expression?

 $(5-7+5)^2$ 

11) Assistment #34326 "34326 - Morph 2006 #12" What is the value of the expression below?

|-15| - |-13|

12) Assistment #46525 ''46525 - 27415 - Absolute Value - Easy Simplifications''

Simplify the following:

-215

**13**) Assistment #147728 ''147728 - -32'' -3<sup>2</sup>

14) Assistment #147729 "147729 - (-2)2" (-2)<sup>2</sup>

2 of 6

#### 15) Assistment #147732 ''147732 - Which quadrant do...''

Which quadrant does this point live in? (-2,5)		
		Ι
		IV
) I		
Π		
о п О П		

# **16**) Assistment #228122 "228122 - What goes in the ..." What goes in the blank? -13 \_\_\_\_ 9

0 <

>

#### 17) Assistment #228123 ''228123 - What goes in the ...''

What goes in the blank? 0.34 \_\_\_\_\_ -0.7

=
 <</li>
 >

#### 18) Assistment #47852 ''47852 - Adding Fractions with Mixed Numbers''

What is the sum of  $1 \frac{2}{5} + 4 \frac{1}{8}$ ?

Be sure to put a space between the whole number and the fraction in your answer. For example the answer should look like this: 62/3. Not like this: 62/3
19) Assistment #47970 ''479	70 - Sı	ubtracting Fractions''
	2	1
What is the difference of		<u> </u>
	5	9

**20)** Assistment #210779 ''210779 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 78.78 + 65.356?

**21**) Assistment #220696 ''220696 - 208598 - Subtraction of Decimals - G'' What is 66.32 - 65.3?

**22**) Assistment #209184 ''209184 - 208516 - Plot the point'' Olivia has to plot 5 points for homework. Which is the point with the coordinates (-5,-2)?

C		ŀ	ł
~	r	-	-

🔘 B

🔘 C

🔘 D

🔘 E

#### 23) Assistment #48181 "48181 - Multiplying Fractions"

```
What is the product of \frac{8}{5} \times \frac{3}{4}?
```

#### 24) Assistment #112284 "112284 - Dividing Fractions Template"

	2	1
What is the quotient of	2 — ÷	2 —?
	7	6

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 6 2/3. Not like this: 62/3

25) Assistment #208092 ''208092 - 125385 - Multiplication by powers of 10 - Tens and tenths'' What is  $63.19 \times 0.1?$ 

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

#### 26) Assistment #39491 ''39491 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

## 0.21 0.27

0 =

27) Assistment #122853 ''122853 - 116386 - Division - Decimals:decimal/decimal - Using Multiplication Table'' What is  $2.1 \div 0.7$ ?

Assistment - Printing Content

## Problem Set "Mid Test for Accentuate the Negative from WPI" id:[37103]

#### 1) Assistment #39403 "39403 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.15 🗌 0.81

>

2) Assistment #47711 "47711 - Adding Fractions" What is the sum of  $\frac{1}{5} + \frac{2}{7}$ ?

3) Assistment #47967 "47967 - Subtracting Fractions" What is the difference of  $\frac{3}{5} - \frac{1}{6}$ ?

4) Assistment #210744 "210744 - Addition of decimals - Tenths place + Thousandths place" What is 912.6 + 80.828?

5) Assistment #220683 "220683 - 194991 - Subtraction of Decimals - A" What is 67 - 0.052?

## 6) Assistment #209169 "209169 - 208521 - Point E coordinates" What are the coordinates of Point E? Use the form (x,y)

## 7) Assistment #48176 "48176 - Multiplying Fractions" What is the product of $\frac{5}{7}$ x $\frac{5}{4}$ ?

#### 8) Assistment #112265 "112265 - Dividing Fractions Template"

	14	8
What is the quotient of	<u> </u>	2?
	17	11

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 6 2/3. Not like this: 62/3

```
9) Assistment #208086 "208086 - Multiplying Decimals"
What is 9.3 x 4.23?
```

10) Assistment #122853 "122853 - 116386 - Division - Decimals:decimal/decimal - Using Multiplication Table"

What is  $2.1 \div 0.7$ ?

#### Problem Set "Post Test for Accentuate the Negative from WPI" id:[37174]

**1)** Assistment #34509 "34509 - Subtraction - Integers " What is (-21) - (-12)?

2) Assistment #46611 "46611 - Addition-Integers: negative + positive" What is (-6) + 4?

3) Assistment #50845 "50845 - Addition-Integers: negative + negative" What is (-4) + (-15)?

4) Assistment #34758 "34758 - Division - Integers" What is the value of p that makes the statement true? -136 / p = -8

5) Assistment #34775 "34775 - Division - Integers" What is 40 ÷ (-10)?

6) Assistment #34682 "34682 - Multiplication of Integers" What is 7 \* (-2)?

7) Assistment #38613 "38613 - Ordering" Arrange these numbers from least to greatest. -12.8, 1/2, 3.8, -7/2

3.8, -12.8, 1/2, -7/2

-12.8, -7/2, 3.8, 1/2

• -7/2, -12.8, 1/2, 3.8

0 -12.8, -7/2, 1/2, 3.8

8) Assistment #27875 "27875 - 12315 - Accentuate the Negative: Inv 4, 2a Hints - Morph1"
Evaluate the expression below:

3 + ((-7) \* 2) - 8

9) Assistment #27977 "27977 - 12315 - Accentuate the Negative: Inv 4, 2a Hints - Morph2" Evaluate the expression below:

 $2 + 3^2 - 8 * 4 - (-7)$ 

10) Assistment #37207 "37207 - Exponents, Order of operations" What is the value of this expression?  $(5-7+5)^2$ 

**11)** Assistment #34326 "34326 - Morph 2006 #12" What is the value of the expression below?

|-15| - |-13|

12) Assistment #46525 "46525 - 27415 - Absolute Value - Easy Simplifications"

Simplify the following:

-215

13) Assistment #147728 "147728 - -32" -3<sup>2</sup>





16) Assistment #228122 "228122 - What goes in the"		
What goes in the blank? -13 9		
0 <		
O >		
○ =		



### 18) Assistment #47717 "47717 - Adding Fractions" 3

1



What is 652.602 - 651.435?

What are the coordinates of Point A?

22) Assistment #209192 "209192 - 206262 - Point A coordinates"

Use the form (x,y) include parentheses, no spaces.

#### 23) Assistment #48273 "48273 - Multiplying Fractions with Mixed Numbers" 2 1

What is the product of  $1 \frac{2}{3} \times \frac{1}{6}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/3

#### 24) Assistment #112286 "112286 - Dividing Fractions Template"

	2	5
What is the quotient of	$3 - \div 2$	-?
	5	7

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

# **25)** Assistment #208114 "208114 - Multiplying Decimals" What is 0.067 x 0.14?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

26) Assistment #122917 "122917 - Division - Decimal: Decimal divided by whole using multiplication table"

What is  $0.54 \div 9$ ?

#### 27) Assistment #39557 "39557 - Fill in the blank..."

Fill in the blank to make the statement true.

7.7<u>?</u> to 7.70 > 

## Problem Set "Ordering Decimals: using <,>, =" id:[6040]

1) Assistment #39560 "39560 - Fill in the blank..." Fill in the blank to make the statement true.

2.7<u>?</u> to 2.70 > <pr

## 2) Assistment #39549 ''39549 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

## 0.26 🗌 0.26

>
>
=

#### 3) Assistment #39504 ''39504 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

0.58	0.52
0.30	0.34

 >
 >
 =

#### 4) Assistment #39619 ''39619 - Ordering Decimals''

0.62<u>?</u>0.67 > 0.62 

#### 5) Assistment #39484 "39484 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

 >
 =

#### 6) Assistment #39431 "39431 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.36 🗌 0.74

 >

#### 7) Assistment #39414 ''39414 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

## 0.26 🗌 0.71

 >

#### 8) Assistment #39599 "39599 - Fill in the blank..." Fill in the blank to make the statement true.

0.64 is <u>1</u> to 0.22

0.04 is <a>10 0.22</a>
 >

## 9) Assistment #39548 "39548 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.16 🗌 0.16

 >
 >
 =

10) Assistment #39577 ''39577 - Fill in the blank...''
Fill in the blank to make the statement true.
6.6 ? to 6.60
>

#### 11) Assistment #39515 "39515 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.86 🗌 0.84

>

12) Assistment #39439 "39439 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.82 0.38

) < ) > ) =

#### 13) Assistment #39540 ''39540 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

0.28	0.28

 >
 =

#### 14) Assistment #39423 "39423 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

	0.46 🗌 0.64
◎ <	
◎ >	
◎ =	

#### 15) Assistment #39453 "39453 - Ordering Decimals"

What should  $\Box$  be to make the following statement true?

## 0.51 🗌 0.37

 >
 >
 =

#### 16) Assistment #39485 ''39485 - Ordering Decimals''

What should  $\Box$  be to make the following statement true?

### 0.14 🗌 0.15

 >



#### Problem Set "Adding and Subtracting Proper Fractions" id:[37971]

1) Assistment #235696 "235696 - Subtracting Proper Fractions" Find the difference:

 $\begin{array}{ccc}
 7 & 5 \\
 - & - \\
 12 & 12
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

2) Assistment #235787 "235787 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**3**) Assistment #235759 "235759 - Adding Proper Fractions" Find the sum:

> 5 2- + -6 5

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

4) Assistment #235695 ''235695 - Subtracting Proper Fractions'' Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

5) Assistment #235706 "235706 - Subtracting Proper Fractions"

Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

6) Assistment #235716 "235716 - Subtracting Proper Fractions" Find the difference:

> 8 4 - - -9 7

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

7) Assistment #235672 ''235672 - Subtracting Proper Fractions'' Find the difference:

 $\begin{array}{cccc}
 1 & 1 \\
 - & - & - \\
 9 & 18
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

8) Assistment #235745 "235745 - 224085 - Adding Proper Fractions" Find the sum:

 $\begin{array}{ccc}
 7 & 1 \\
 - & + & - \\
 12 & 9
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**9**) Assistment #235663 "235663 - Subtracting Proper Fractions" Find the difference:

 $\begin{array}{cccc}
4 & 1 \\
- & - & - \\
5 & 10
\end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

10) Assistment #235753 "235753 - 224085 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

11) Assistment #235657 "235657 - Adding Proper Fractions" Find the sum:

 $\begin{array}{cccc}
 1 & 1 \\
 - & + & - \\
 2 & 2
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**12**) Assistment #235646 ''235646 - 229256 - Subtracting Proper Fractions'' Find the difference:

7 1 - - -9 6

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

13) Assistment #235731 "235731 - 224085 - Adding Proper Fractions" Find the sum:



Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

14) Assistment #235773 "235773 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**15)** Assistment #235710 "235710 - Subtracting Proper Fractions" Find the difference:

6 1 - - -7 9

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

16) Assistment #235737 "235737 - 224085 - Adding Proper Fractions" Find the sum:

 $\begin{array}{ccc}
 7 & 5 \\
 - & + & - \\
 8 & 12
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**17**) Assistment #235680 "235680 - Subtracting Proper Fractions" Find the difference:

 Problem Set " Adding and Subtracting Mixed Numbers" id:[37981]

1) Assistment #236298 "236298 - 224052 - Subtracting Mixed Numbers" Find the difference:

$$10^{-}_{-3} - 7^{-}_{-3}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

2) Assistment #236250 "236250 - Adding Mixed Numbers" Find the sum:

$$4 \frac{1}{2} + 7 \frac{2}{3}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

3) Assistment #236055 ''236055 - 224053 - Subtracting Mixed Numbers'' Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

4) Assistment #236369 "236369 - 229272 - Subtracting Mixed Numbers" Find the difference:

$$5 - 3 - 7 - 3 - 10$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

http://www.assistments.org/build/print/sequence/37981?mode=test&op\_scaf=false&op\_hi... 3/26/2012

5) Assistment #236635 ''236635 - 224053 - Subtracting Mixed Numbers'' Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

6) Assistment #236214 "236214 - 229270 - Adding Mixed Numbers" Find the sum:

$$2 \frac{1}{4} + 1 \frac{7}{10}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

7) Assistment #236301 ''236301 - 224052 - Subtracting Mixed Numbers'' Find the difference:

$$10 \frac{5}{11} - 1 \frac{8}{11}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

8) Assistment #236073 "236073 - 224054 - Subtracting Mixed Numbers" Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

9) Assistment #236058 "236058 - 224053 - Subtracting Mixed Numbers" Find the difference:

11 1 - 6 5

8

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

2

**10**) Assistment #236309 "236309 - 229272 - Subtracting Mixed Numbers" Find the difference:

$$7 - 3 - 3 - 12$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

11) Assistment #236174 "236174 - 229270 - Adding Mixed Numbers" Find the sum:

$$5 \frac{8}{9} + 9 \frac{11}{12}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

12) Assistment #236111 "236111 - Adding Mixed Numbers" Find the sum:

$$10\frac{4}{5} + 8\frac{9}{10}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 3 5/8)

13) Assistment #236266 "236266 - Adding Mixed Numbers" Find the sum:

$$8 \frac{1}{6} + 7 \frac{2}{5}$$

Answers must be in the form of a *reduced proper fraction* (example 2/7) or a *mixed number* with a space

http://www.assistments.org/build/print/sequence/37981?mode=test&op\_scaf=false&op\_hi... 3/26/2012

between the whole number and the fraction (example 3 5/8)

14) Assistment #236292 "236292 - 224052 - Subtracting Mixed Numbers" Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**15) Assistment #236179 ''236179 - 229270 - Adding Mixed Numbers''** Find the sum:

$$3\frac{5}{6} + 9\frac{3}{10}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**16) Assistment #236279 ''236279 - Adding Mixed Numbers''** Find the sum:

$$4\frac{3}{7} + 5\frac{7}{12}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

17) Assistment #236406 "236406 - Adding Mixed Numbers" Find the sum:

 $10 \frac{1}{2} + 3\frac{1}{2}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

http://www.assistments.org/build/print/sequence/37981?mode=test&op\_scaf=false&op\_hi... 3/26/2012

Problem Set "Addition and Subtraction: Positive Decimals - LEVEL 1 SKILL BUILDING Addition" id:[35094]

1) Assistment #210897 "210897 - Addition of decimals - Tenths place + Thousandths place" What is 66.1 + 727.437?

2) Assistment #210771 "210771 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 358.4 + 296.242?

**3**) Assistment #210820 ''210820 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 157.4 + 354.76?

**4**) Assistment #210851 "210851 - 195379 - Mika - Addition of decimals - Range " What is 31938 + 0.421686?

5) Assistment #210846 "210846 - 195379 - Mika - Addition of decimals - Range " What is 20315 + 0.605217?

6) Assistment #210783 "210783 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 272.74 + 179.48?

7) Assistment #210854 "210854 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 306.87 + 78.802?

8) Assistment #210776 ''210776 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 713.7 + 6.5?

**9**) Assistment #210838 ''210838 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 3.17 + 167.86?

**10)** Assistment #210865 ''210865 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 8.388 + 24.624?

11) Assistment #210749 "210749 - Addition of decimals - Tenths place + Thousandths place" What is 2.3 + 669.415? 12) Assistment #210809 "210809 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 723.74 + 5.715? 13) Assistment #210886 "210886 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 182.6 + 3.42? 14) Assistment #210779 "210779 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 78.78 + 65.356? 15) Assistment #210837 "210837 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 8.45 + 471.86? 16) Assistment #210878 "210878 - Addition of decimals - Hundredths place" What is 4.30 + 5.68? 17) Assistment #210814 "210814 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 97.6 + 45.44? 18) Assistment #210823 "210823 - Addition of decimals - Tenths place" What is 1.5 + 4.5? 19) Assistment #210847 ''210847 - 195379 - Mika - Addition of decimals - Range '' What is 9785 + 0.183551? 20) Assistment #210757 "210757 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 26.4 + 16.776?

21) Assistment #210780 "210780 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 67.64 + 67.475? 22) Assistment #210804 "210804 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 44.453 + 97.885? 23) Assistment #210888 "210888 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 400.3 + 4.72? 24) Assistment #210767 "210767 - Addition of decimals - Tenths place + Thousandths place" What is 1.4 + 4.372? 25) Assistment #210778 "210778 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 650.1 + 8.8? 26) Assistment #210894 "210894 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 251.12 + 292.687? 27) Assistment #210816 ''210816 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 188.1 + 62.5? 28) Assistment #210875 ''210875 - Addition of decimals - Tenths place + Thousandths place'' What is 518.4 + 7.578? 29) Assistment #210885 "210885 - Addition of decimals - Hundredths place" What is 72.57 + 6.78?

30) Assistment #210798 "210798 - Addition of decimals - Hundredths place" What is 18.95 + 18.49?

31) Assistment #210862 "210862 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 340.808 + 9.312?

http://www.assistments.org/build/print/sequence/35094?mode=test&op\_scaf=false&op\_hi... 3/26/2012

32) Assistment #210786 "210786 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 891.3 + 82.73? 33) Assistment #210867 "210867 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 7.375 + 72.817? 34) Assistment #210766 ''210766 - Addition of decimals - Tenths place'' What is 18.3 + 81.6? 35) Assistment #210830 "210830 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 41.51 + 4.185? 36) Assistment #210858 "210858 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 1.63 + 2.607? 37) Assistment #210785 ''210785 - 194969 - Mika - Addition of decimals - Range .001 and 100'' What is 379.76 + 478.37? 38) Assistment #210840 "210840 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 8.212 + 6.114? 39) Assistment #210815 "210815 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 10.4 + 41.44? 40) Assistment #210799 "210799 - Addition of decimals - Hundredths place" What is 16.51 + 16.21? 41) Assistment #210756 "210756 - 194969 - Mika - Addition of decimals - Range .001 and 100" What is 20.6 + 22.285?

http://www.assistments.org/build/print/sequence/35094?mode=test&op\_scaf=false&op\_hi... 3/26/2012

Problem Set "Addition and Subtraction: Positive Decimals - LEVEL 2 SKILL BUILDING Subtraction" id:[36551]

1) Assistment #220709 ''220709 - 208599 - Subtraction of Decimals - H'' What is 96 - 95.72?

2) Assistment #220780 ''220780 - 198620 - Subtraction of Decimals - C'' What is 6283 - 0.003364?

**3**) Assistment #220781 ''220781 - 198620 - Subtraction of Decimals - C'' What is 54.08 - 0.005207?

**4)** Assistment #220774 "220774 - 198620 - Subtraction of Decimals - C" What is 4013 - 0.007025?

5) Assistment #220706 ''220706 - 208599 - Subtraction of Decimals - H'' What is 52 - 51.41?

6) Assistment #220775 ''220775 - 198620 - Subtraction of Decimals - C'' What is 52780 - 0.009275?

7) Assistment #220736 ''220736 - Subtraction of Decimals - B'' What is 84.5 - 0.837?

8) Assistment #220788 ''220788 - 208586 - Subtraction of Decimals - E'' What is 6 - 5.2?

**9**) Assistment #220790 ''220790 - 208586 - Subtraction of Decimals - E'' What is 8 - 7.2?

**10**) Assistment #220702 "220702 - 208598 - Subtraction of Decimals - G" What is 93.7 - 56.13?

**11**) Assistment #220710 ''220710 - 208599 - Subtraction of Decimals - H'' What is 96 - 95.04?

**12**) Assistment #220760 "220760 - 208602 - Subtraction of Decimals - K" What is 790.4 - 789.401?

**13**) Assistment #220732 "220732 - 208601 - Subtraction of Decimals - J" What is 83.778 - 82.23?

**14)** Assistment #220707 "220707 - 208599 - Subtraction of Decimals - H" What is 78 - 77.82?

**15)** Assistment #220767 "220767 - 208597 - Subtraction of Decimals - F" What is 86.05 - 5.83?

**16**) Assistment #220712 "220712 - 208599 - Subtraction of Decimals - H" What is 59 - 41.78?

17) Assistment #220688 "220688 - 194991 - Subtraction of Decimals - A" What is 39 - 0.077?

**18**) Assistment #220694 "220694 - 208598 - Subtraction of Decimals - G" What is 74.02 - 21.1?

**19**) Assistment #220748 "220748 - 208585 - Subtraction of Decimals - D" What is 8.1 - 7.5?

**20**) Assistment #220703 "220703 - 208599 - Subtraction of Decimals - H" What is 94 - 93.88?

**21) Assistment #220772 ''220772 - 208597 - Subtraction of Decimals - F''** What is 36.88 - 35.82?

**22**) Assistment #220757 ''220757 - 208602 - Subtraction of Decimals - K'' What is 967.586 - 966.2?

23) Assistment #220717 ''220717 - 208600 - Subtraction of Decimals - I'' What is 815.562 - 814.658?

24) Assistment #220746 "220746 - 208585 - Subtraction of Decimals - D" What is 8.1 - 7.5?

25) Assistment #220715 "220715 - 208600 - Subtraction of Decimals - I" What is 827.072 - 130.817?

**26**) Assistment #220773 "220773 - 198620 - Subtraction of Decimals - C" What is 1600 - 0.000396?

**27**) Assistment #220769 "220769 - 208597 - Subtraction of Decimals - F" What is 14.17 - 7.11?

**28) Assistment #220705 ''220705 - 208599 - Subtraction of Decimals - H''** What is 84 - 55.76?

**29**) Assistment #220689 "220689 - 194991 - Subtraction of Decimals - A" What is 85 - 0.027?

**30**) Assistment #220686 "220686 - 194991 - Subtraction of Decimals - A" What is 18 - 0.014?

31) Assistment #220716 "220716 - 208600 - Subtraction of Decimals - I"

What is 573.523 - 572.415?

**32) Assistment #220741 ''220741 - Subtraction of Decimals - B''** What is 7.7 - 0.442?

**33**) Assistment #220731 "220731 - 208601 - Subtraction of Decimals - J" What is 73.455 - 72.37?

**34)** Assistment #220777 "220777 - 198620 - Subtraction of Decimals - C" What is 40570 - 0.000581?

**35**) Assistment #220714 "220714 - 208600 - Subtraction of Decimals - I" What is 725.183 - 472.678?

**36**) Assistment #220687 "220687 - 194991 - Subtraction of Decimals - A" What is 41 - 0.024?

**37**) Assistment #220740 "220740 - Subtraction of Decimals - B" What is 4.64 - 0.186?

**38**) Assistment #220752 "220752 - 208585 - Subtraction of Decimals - D" What is 8.1 - 7.5?

**39**) Assistment #220701 "220701 - 208598 - Subtraction of Decimals - G" What is 59.46 - 41.1?

**40**) Assistment #220776 "220776 - 198620 - Subtraction of Decimals - C" What is 36720 - 0.004743?

**41**) Assistment #220787 "220787 - 208586 - Subtraction of Decimals - E" What is 6 - 5.5?

#### Problem Set "Point Plotting - THE SKILL BUILDING SET" id:[35008]

1) Assistment #209218 ''209218 - 208507 - Plot the point''

Danielle has to plot 5 points for homework. Which is the point with the coordinates (-4,4)?

A
 B
 C
 D
 E

**2)** Assistment #209223 "209223 - 208507 - Plot the point" Beth has to plot 5 points for homework. Which is the point with the coordinates (-4,4)?

A

- 🔘 B
- 🔘 C
- 🔘 D
- 🔘 E

**3**) Assistment #209233 ''209233 - 208518 - Point B coordinates'' What are the coordinates of Point B? Use the form (x,y)



**4)** Assistment #209213 ''209213 - 206263 - Plot the point'' Mary has to plot 5 points for homework. Which is the point with the coordinates (-4,0)? A
 B
 C
 D
 E

5) Assistment #209248 "209248 - 208519 - Point C coordinates" What are the coordinates of Point C? Use the form (x,y)



6) Assistment #209209 ''209209 - 206263 - Plot the point'' Karen:Kate has to plot 5 points for homework. Which is the point with the coordinates (-6,3)? A
 B
 C

🔘 D

🔘 E

7) Assistment #209230 ''209230 - 208518 - Point B coordinates''

What are the coordinates of Point B? Use the form (x,y)

8) Assistment #209234 ''209234 - 208518 - Point B coordinates'' What are the coordinates of Point B? Use the form (x,y)


6) Assistment #48296 ''48296 - Multiplying Fractions with Mixed Numbers''



You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

7) Assistment #48170 ''48170 - Multiplying Fractions''

What is the product of  $\frac{5}{4} \times \frac{6}{2}$ ?

8) Assistment #48281 ''48281 - Multiplying Fractions with Mixed Numbers''

What is the product of  $1 \frac{1}{4} \times \frac{1}{4}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3



You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the	ne fraction in
your answer. The answer should look like this: $6 2/3$ . Not like this: $62/3$	

# 12) Assistment #48195 "48195 - Multiplying Fractions"

What is the product of 
$$\frac{8}{7}$$
 x  $\frac{9}{6}$ ?

13) Assistment #48291 ''48291 - Multiplying Fractions with Mixed Numbers''

What is the product of 
$$1 \frac{1}{3} \times \frac{1}{3}$$
?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

# 14) Assistment #48190 "48190 - Multiplying Fractions"

What is the product of 
$$\frac{8}{1} \times \frac{2}{7}$$
?

15) Assistment #48174 "48174 - Multiplying Fractions"

What is the product of  $\frac{\delta}{2} \times \frac{1}{6}$ ?

16) Assistment #48269 ''48269 - Multiplying Fractions with Mixed Numbers''

What is the product of 
$$1 \frac{1}{2} \times \frac{1}{2}$$
?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3





18) Assistment #48283 ''48283 - Multiplying Fractions with Mixed Numbers''

What is the product of  $1 \frac{2}{3} \times \frac{1}{6}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

# 19) Assistment #48179 "48179 - Multiplying Fractions"

What is the product of  $\frac{7}{5} \times \frac{3}{4}$ ?

20) Assistment #48279 ''48279 - Multiplying Fractions with Mixed Numbers''

What is the product of  $1 \frac{1}{2} \times \frac{1}{2}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

21) Assistment #48175 "48175 - Multiplying Fractions" What is the product of  $\frac{3}{2} \times \frac{5}{2}$ ? 22) Assistment #48288 "48288 - Multiplying Fractions with Mixed Numbers"

What is the product of  $2 \frac{1}{2} \times \frac{1}{11}$ ?

#### Problem Set "Division Fractions - THE SKILL BUILDING SET" id:[14211]

1) Assistment #112305 "112305 - Dividing Fractions Template"

	3	1
What is the quotient of	$3 - \div 2$	2 - ?
	7	3

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

2) Assistment #112311 "112311 - 46275 - Dividing Fractions with Mixed Numbers Template"

What is the quotient of  $3 \frac{1}{5} \div \frac{3}{8}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

3) Assistment #112312 "112312 - 46275 - Dividing Fractions with Mixed Numbers Template"

What is the quotient of  $1 \frac{1}{5} \div \frac{1}{5}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

#### 4) Assistment #112297 "112297 - Dividing Fractions Template"

What is the quotient of	4 — ÷	
	6	

 $4 \quad \frac{4}{6} \quad \div \quad 2 \quad \frac{1}{-2}?$ 

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

#### 5) Assistment #112364 "112364 - 106622 - Dividing Fractions Template"

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

6) Assistment #112307 "112307 - 46275 - Dividing Fractions with Mixed Numbers Template"

What is the quotient of  $3 \frac{1}{5} \div \frac{3}{8}$ ?

You MUST reduce your answer to lowest terms.

What is the quotient of  $\frac{6}{8} \div \frac{2}{1}$ ?

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 6 2/3. Not like this: 62/3

8) Assistment #112348 "112348 - 29863 - Dividing Fracitons" What is the quotient of  $\frac{8}{8} \div \frac{3}{7}$ ?

7) Assistment #112349 "112349 - 29863 - Dividing Fracitons"

9) Assistment #112272 ''112272 - Dividing Fractions Template''

	9	12
What is the quotient of	— ÷	4?
-	9	9

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/3

10) Assistment #112372 "112372 - 106622 - Dividing Fractions Template"

What is the quotient of  $13 \div 7$ ?

Page 2 of 27

17 17

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/3

11) Assistment #112353 "112353 - 29863 - Dividing Fracitons" What is the quotient of  $\frac{\circ}{1} \div \frac{9}{3}$ ? 12) Assistment #112319 "112319 - 46275 - Dividing Fractions with Mixed Numbers Template" What is the quotient of  $3 \frac{1}{2} \div \frac{3}{4}$ ? You MUST reduce your answer to lowest terms. If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/313) Assistment #112320 "112320 - 46275 - Dividing Fractions with Mixed Numbers Template" What is the quotient of  $1 \frac{1}{5} \div \frac{1}{5}$ ? You MUST reduce your answer to lowest terms. If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/3

14) Assistment #112363 "112363 - 106622 - Dividing Fractions Template"

What is the quotient of 21

 $\begin{array}{c} 6 & 18 \\ --- \div --- ? \end{array}$ 

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this: 62/3. Not like this: 62/3

15) Assistment #112370 "112370 - 106622 - Dividing Fractions Template"

16 <sub>÷</sub> 9 ? What is the quotient of

18 18

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

	- Dividing Fractions Template''
10) Assistment #112270 112270	7 9
What is the quotient of	$ \div$ 4 $-$ ?
-	15 13
If your answer is a mixed num your answer. The answer shou	ber, be sure to put a space between the whole number and the fraction in ld look like this: $6 \frac{2}{3}$ . Not like this: $62/3$
7) Assistment #112378 ''112378	- 106622 - Dividing Fractions Template''
What is the quatient of	
what is the quotient of	$\overline{19}$ $\overline{19}$ $\overline{19}$
8) Assistment #112296 ''112296	- Dividing Fractions Template''
What is the quotient of	$3 \stackrel{2}{-} \div 2 \stackrel{1}{-} 2$
What is the quotient of	$3 \frac{2}{5} \div 2 \frac{1}{6}?$
What is the quotient of You MUST reduce your answe	$3 \frac{2}{5} \div 2 \frac{1}{6}?$ er to lowest terms.
What is the quotient of You MUST reduce your answe If your answer is a mixed num your answer. The answer shou	$3 \frac{2}{5} \div 2 \frac{1}{6}$ er to lowest terms. ber, be sure to put a space between the whole number and the fraction in ld look like this: 6 2/3. Not like this: 62/3
What is the quotient of You MUST reduce your answer If your answer is a mixed num your answer. The answer shou	$3 \frac{2}{5} \div 2 \frac{1}{6}$ er to lowest terms. ber, be sure to put a space between the whole number and the fraction in ld look like this: 6 2/3. Not like this: 62/3
What is the quotient of You MUST reduce your answer If your answer is a mixed num your answer. The answer shou 9) Assistment #112375 "112375	$3 \frac{2}{5} \div 2 \frac{1}{6}?$ er to lowest terms. ber, be sure to put a space between the whole number and the fraction in ld look like this: 6 2/3. Not like this: 62/3
What is the quotient of You MUST reduce your answer If your answer is a mixed num your answer. The answer shou 9) Assistment #112375 "112375	$3 \frac{2}{5} \div 2 \frac{1}{6}?$ er to lowest terms. ber, be sure to put a space between the whole number and the fraction in ld look like this: 6 2/3. Not like this: 62/3
What is the quotient of You MUST reduce your answer If your answer is a mixed num your answer. The answer shou 9) Assistment #112375 "112375 What is the quotient of	$3 \frac{2}{5} \div 2 \frac{1}{6}?$ er to lowest terms. ber, be sure to put a space between the whole number and the fraction in ld look like this: 6 2/3. Not like this: 62/3 <b>7 - 106622 - Dividing Fractions Template''</b> $\frac{17}{20} \div \frac{9}{20}?$

Problem Set "Multiplication and Division Decimals - LEVEL 1 SKILL BUILDING Multiplication" id: [34666]

1) Assistment #208118 ''208118 - Multiplying Decimals'' What is 0.73 x 0.98?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

2) Assistment #208111 ''208111 - 125868 - Multiplication by powers of 10 - Adding zeroes'' What is  $6.3 \times 0.01$ ?

For answers with only 0 after the decimal do not include the decimal or the zero. (this is only because this is a computer)

(For example: 23.0 = wrong, 23 = right)

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

3) Assistment #208132 "208132 - 205620 - Multiplicantion of decimals - Tenths place" Find the product of 4.5 and 4

4) Assistment #208095 ''208095 - 125385 - Multiplication by powers of 10 - Tens and tenths'' What is  $16.15 \times 10$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

5) Assistment #208101 "208101 - 125399 - Multiplication by powers of 10 - Positive powers of 10" What is  $830.51 \times 10$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

6) Assistment #208133 "208133 - 205620 - Multiplicantion of decimals - Tenths place" Find the product of 8.6 and 7

7) Assistment #208122 "208122 - 205620 - Multiplicantion of decimals - Tenths place" Multiply: 4.5 \* 3.4?

8) Assistment #208102 "208102 - 125734 - Multiplication by powers of 10 - Negative powers of ten" What is  $803.2 \times 0.01$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

9) Assistment #208125 ''208125 - 205631 - 194969 - Mika - Multiplication of decimals - Range .001 and 100'' Multiply 0.47 and 0.54, rounding the answer to the nearest thousandth.

10) Assistment #208109 ''208109 - 125868 - Multiplication by powers of 10 - Adding zeroes'' What is  $5.7 \times 0.001$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

11) Assistment #208105 ''208105 - 125734 - Multiplication by powers of 10 - Negative powers of ten'' What is  $176.2 \times 0.001$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

**12**) Assistment #208116 "208116 - Multiplying Decimals" What is 6.9 x 0.012?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

**13**) Assistment #208126 "208126 - 205631 - 194969 - Mika - Multiplication of decimals - Range .001 and 100" Multiply 0.43 and 0.38, rounding the answer to the nearest thousandth.

**14)** Assistment #208115 "208115 - Multiplying Decimals" What is 6.8 x 0.47?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

15) Assistment #208100 "208100 - 125399 - Multiplication by powers of 10 - Positive powers of 10" What is  $472.375 \times 10$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

16) Assistment #208098 "208098 - 125399 - Multiplication by powers of 10 - Positive powers of 10" What is  $697.267 \times 100$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

17) Assistment #208106 "208106 - 125734 - Multiplication by powers of 10 - Negative powers of ten" What is  $276.6 \times 0.001$ ?

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

18) Assistment #208103 ''208103 - 125734 - Multiplication by powers of 10 - Negative powers of ten'' What is  $503.1 \times 0.01?$ 

For answers with no number to the left of the decimal, put a zero there. (this is only because this is a computer)

(For example: .5 = wrong, 0.5 = right)

Problem Set "Multiplication and Division of Decimals - THE SKILL BUILDING SET" id:[16322]

1) Assistment #122916 "122916 - Division - Decimal: Decimal divided by whole using multiplication table" What is  $0.63 \div 7$ ?

2) Assistment #122852 "122852 - 116386 - Division - Decimals:decimal/decimal - Using Multiplication Table" What is  $5 \div 1$ ?

3) Assistment #122878 "122878 - Dividing a Decimal by a Whole Number" What is 0.08 ÷ 2?

4) Assistment #122883 "122883 - Dividing a Decimal by a Decimal" What is  $0.013 \div 1.3$ ?

5) Assistment #122908 ''122908 - Multiplication - Decimals : Decimal times whole number with no carry'' What is 5.1 \* 9?

6) Assistment #122930 "122930 - Multiplication - Decimal : Decimal times whole number with a carry" What is 7.8 \* 3?

7) Assistment #122905 ''122905 - Multiplication - Decimals : Decimal times whole number with no carry'' What is 9.1 \* 5?

8) Assistment #122898 ''122898 - Multiplication - Decimals : Decimal times whole number with no carry'' What is 3.1 \* 6?

9) Assistment #122912 "122912 - Division - Decimal: Decimal divided by whole using multiplication table" What is  $0.27 \div 3?$ 

**10**) Assistment #122956 "122956 - Multiplying Decimals" What is 9.7 x 2.61?

**11)** Assistment #122936 "122936 - Multiplication - Decimal : Decimal times whole number with a carry" What is 10.9 \* 6?

12) Assistment #122873 "122873 - Dividing a Decimal by a Whole Number" What is  $0.05 \div 1$ ?

**13**) Assistment #122910 "122910 - Multiplication - Decimals : Decimal times whole number with no carry" What is 3.4 \* 2?

**14) Assistment #122954 "122954 - Multiplying Decimals"** What is 9 x 0.32?

**15) Assistment #122949 "122949 - Multiplying Decimals"** What is 7.4 x 2.15?

16) Assistment #122925 ''122925 - Division - Decimal: Decimal divided by whole using multiplication table'' What is  $0.72 \div 8$ ?

**17**) Assistment #122939 "122939 - Multiplication - Decimal : Decimal times whole number with a carry" What is 3.5 \* 5?

18) Assistment #122880 "122880 - Dividing a Decimal by a Whole Number" What is  $0.02 \div 2$ ?

19) Assistment #122951 "122951 - Multiplying Decimals"

What is 8.2 x 1.88?

**20**) Assistment #122897 ''122897 - Multiplication - Decimals : Decimal times whole number with no carry'' What is 1.1 \* 9?

21) Assistment #122935 ''122935 - Multiplication - Decimal : Decimal times whole number with a carry'' What is 10.7 \* 7?

22) Assistment #122900 "122900 - Multiplication - Decimals : Decimal times whole number with no carry" What is 5.1 \* 5?

**23**) Assistment #122932 "122932 - Multiplication - Decimal : Decimal times whole number with a carry" What is 10.6 \* 9?

24) Assistment #122895 ''122895 - Dividing a Decimal by a Decimal'' What is  $0.038 \div 1.9$ ?

25) Assistment #122913 "122913 - Division - Decimal: Decimal divided by whole using multiplication table" What is  $0.7 \div 7$ ?

**26**) Assistment #122906 "122906 - Multiplication - Decimals : Decimal times whole number with no carry" What is 5.1 \* 6?

**27**) Assistment #122946 "122946 - Multiplying Decimals" What is 8 x 1.2?

28) Assistment #122856 "122856 - 116386 - Division - Decimals:decimal/decimal - Using Multiplication Table"

What is  $1.8 \div 0.6$ ?

**29) Assistment #122884 "122884 - Dividing a Decimal by a Decimal"** What is 0.133 ÷ 1.9?

30) Assistment #122879 ''122879 - Dividing a Decimal by a Whole Number'' What is  $0.25 \div 5?$ 

**31) Assistment #122948 ''122948 - Multiplying Decimals''** What is 8.9 x 2.72?

32) Assistment #122924 ''122924 - Division - Decimal: Decimal divided by whole using multiplication table'' What is  $0.18 \div 6$ ?

**33**) Assistment #122902 "122902 - Multiplication - Decimals : Decimal times whole number with no carry" What is 2.1 \* 6?

**34) Assistment #122953 ''122953 - Multiplying Decimals''** What is 5.4 x 2.67?

**35)** Assistment #122928 "122928 - Multiplication - Decimal : Decimal times whole number with a carry" What is 9.5 \* 6?

**36) Assistment #122955 "122955 - Multiplying Decimals"** What is 5.8 x 2.56?

37) Assistment #122881 "122881 - Dividing a Decimal by a Whole Number" What is  $0.18 \div 2?$ 

Assistment - Printing Content

# Problem Set "Mean - THE SKILL BUILDING SET" id:[19362]

## 1) Assistment #131681 "131681 - 56565 - Mean with Context"

Nancy obtained the following scores in 5 math tests. Calculate the mean of Nancy's math scores:

182, 94, 57, 67, 112

(round to the nearest hundredths place)

2) Assistment #131728 ''131728 - 56643 - Mean with Missing Number and Context''

Penny swam the following number of laps in four days. How many laps would she need to swim on the fifth day to have a mean of 5.4 laps per day?

1, 9, 6, 7

#### 3) Assistment #131720 "131720 - 56648 - Mean with Context and Vertical Table"

Julia runs a grocery store, and listed below are the store sales for the year 1997. What were the average monthly sales in 1997?

Month	Sales (\$)
January	1001
February	1051
March	2506
April	1121
May	1506
June	604
July	1009
August	2203
September	1012
October	1638
November	1920
December	2054

# (round to hundredths place)

4) Assistment #131652 "131652 - Mean"

Calculate the **mean** of the following numbers:

3, 15, 17, 7, 21, 19

(round to the nearest tenths place)

#### 5) Assistment #131746 "131746 - 57309 - Mean with Context, 9"

Abby obtained the following scores in 9 math tests. Calculate the **mean** of Abby's math scores:

42, 58, 90, 91, 51, 30, 39, 64, 69

(round to the nearest hundredths place)

6) Assistment #131683 "131683 - 56565 - Mean with Context"

Hannah obtained the following scores in 5 math tests. Calculate the mean of Hannah's math scores:

205, 83, 45, 124, 89

(round to the nearest hundredths place)

### 7) Assistment #131739 "131739 - 125327 - Mean with Context, 11"

During a medical study, doctors recorded the weights in pounds of all their volunteers. Some of the weights are given here. What is the average weight of the volunteers listed below? 152, 109, 108, 152, 123, 122, 120, 105, 145, 105, 103

(round to the nearest hundredths place)

#### 8) Assistment #131744 ''131744 - 125360 - Mean with Context and Table 1, 8''

The coach for the School Computer Programming team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 8 games.

Name of player	Number of points scored
Jimmy	12,3,8,13,22,17,11,8
Nathalie	16,27,8,11,13,9,17,25

What is the **mean** (average) number of points scored by Jimmy ? (Round to the hundredths place)

9) Assistment #131645 "131645 - Mean Missing Value"

Chris has scored the following points in his last five basketball games: 12, 9, 8, 5, 11.

How many points must he score in the next game to average 12 points per game?

**10**) Assistment #131586 ''131586 - 56562 - Mean of Integers'' Calculate the mean of the following numbers:

183, 142, 24, 134, 69

(round to the nearest hundredths place)

**11)** Assistment #131626 ''131626 - Mean - Smaller Numbers'' Calculate the mean of the following numbers:

7, 5, 4, 4, 5, 10

(round to the nearest hundredths place)

**12**) Assistment #131635 ''131635 - 57306 - Mean of Integers'' Calculate the mean of the following numbers:

111, 115, 120, 70, 98, 45, 56

(round to the nearest hundredths place)

### 13) Assistment #131592 "131592 - 125362 - Mean with Context and Table 2"

The coach for the All-Star Basketball team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored
Shaun	10,3,19,14,23,22,13,2,23,13
Julia	20,21,2,12,6,3,23,26,13,14

What is the mean (average) number of points scored by Julia ?

**14**) Assistment #131666 ''131666 - 57307 - Mean of Integers,8'' Calculate the mean of the following numbers:

89, 154, 138, 69, 21, 3, 72, 38

(round to the nearest hundredths place)

#### 15) Assistment #131648 "131648 - Mean Missing Value"

Chris has scored the following points in his last five basketball games: 10, 7, 6, 8, 14.

How many points must he score in the next game to average 14 points per game?

16) Assistment #131614 "131614 - 125324 - Mean with Context, 12"

During a medical study, doctors recorded the heights in centimeters of all their volunteers. Some of the heights are given here. What is the average height of the volunteers listed below?

176, 195, 165, 181, 168, 192, 189, 204, 152, 162, 175, 171

(round to the nearest hundredths place)

http://assistments.org/build/print/sequence/19362?mode=test&op\_scaf=false&op\_hint=fals... 3/28/2012

#### Problem Set "Median - THE SKILL BUILDING SET" id:[21943]

1) Assistment #137385 ''137385 - Median - Find Missing Data Points - Even'' What number should be added to the list below to get a median of 18?

10, 21, 9, 15, 28

11301

0 10

### 2) Assistment #137491 ''137491 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games
John	40,67,27,80,16,75,57,4,72,24,48
Cristina	22,26,8,11,54,6,9,22,23,18,11

What is the median number of points scored by John?

3) Assistment #137387 "137387 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19?

13, 23, 8, 15, 26

9 🔘

0 14

0 30

04

#### 4) Assistment #137359 "137359 - 56718 - Median with Context and Table and Even values"

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	11,8,14,6,1,20,22,12
Cristina	20,8,27,6,24,22,12,15

What is the median of number of points obtained by Cristina?

5) Assistment #137313 "137313 - 132165 - Median - Find Missing Data Points - Even, 8" What number should be added to the list below to get a **median** of 25.115?

12, 28.23, 35, 19, 61, 8.63, 48

1322

9.63

5.63

#### 6) Assistment #137483 "137483 - 56714 - Median - Find Missing Data Points - Odd, with context"

Mary obtained the following scores in 4 of 5 math tests. If the **median** of Mary's math scores was 21, what was Mary's math score on the fifth test?

14, 26.87, 21, 6 7 15 24 3

#### 7) Assistment #137488 ''137488 - 56714 - Median - Find Missing Data Points - Odd, with context''

John obtained the following scores in 4 of 5 math tests. If the **median** of John's math scores was 17, what was John's math score on the fifth test?

	12,	26.87,	17,	7
8				
13				
26				
<b>0</b> 4				

# 8) Assistment #137357 ''137357 - 56718 - Median with Context and Table and Even values''

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	6,8,9,9,8,21,26,20

Cristina 18,8,27,4,24,22,12,15

What is the median of number of points obtained by Cristina ?

9) Assistment #137379 "137379 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[1.33, 3.85, 1.65, 2.11, 1.12, 4.51, 2.33, 2.69, 3.91]

What is the **median** number in this list?

**10**) Assistment #137402 ''137402 - Median - Find Missing Data Points - Odd'' What number should be added to the list below to get a **median** of 18?

- 11, 23, 5, 18
- 25
  17
  6

02

# 11) Assistment #137386 "137386 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19.5?

- 14, 22, 9, 17, 25
- 0 10

15

0 33

6 4

12) Assistment #137466 ''137466 - 56719 - Median with Context and Vertical Table''

Liz runs a grocery store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1125	
February	2506	
March	1922	
April	607	
May	1044	
June	901	

July	1507	
August	1631	
September	1006	
October	1021	
November	2203	
December	2054	

# 13) Assistment #137472 "137472 - 56719 - Median with Context and Vertical Table"

Ashley runs a shoe store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1126	
February	2504	
March	1924	
April	601	
May	1045	
June	903	
July	1501	
August	1636	
September 1002		
October 1024		
November	2201	
December 2050		

# 14) Assistment #137336 "137336 - 56717 - Median with Context and Table and Odd values"

The coach for the School Tennis Team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 7 games.

Name of player	Number of points scored on the last ten games	
Brian	20,8,15,5,23,22,13	
Camille	12,10,12,7,9,23,24	

# What is the **median** of number of points scored by Brian ?

http://assistments.org/build/print/sequence/21943?mode=test&op\_scaf=false&op\_hint=fals... 3/28/2012

#### Problem Set "Median - LEVEL 1 SKILL BUILDING" id:[21947]

#### 1) Assistment #137657 ''137657 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games	
Jose	37,65,26,81,17,75,61,2,70,23,51	
Beth	20,27,3,10,46,7,2,21,30,16,14	

What is the median number of points scored by Jose?

# 2) Assistment #137525 "137525 - 56717 - Median with Context and Table and Odd values"

The coach for the All-USA Math Team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 7 tests.

Name of player	Number of points scored on the last ten games
Chris	18,9,16,6,23,22,13
Liz	8,2,9,8,5,15,22

What is the **median** of number of points obtained by Chris ?

**3**) Assistment #137624 "137624 - Median: Odd Number of Values" Below is a list of numbers.

[26, 53, 38, 50, 21, 85, 77, 43, 30, 91, 47, 55, 40]

What is the **median** number in this list?

# 4) Assistment #137652 ''137652 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games
Shaun	34,65,26,81,15,78,57,2,73,21,48
Julia	16,23,2,16,52,11,9,17,29,20,9

What is the median number of points scored by Shaun ?

#### 5) Assistment #137656 ''137656 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games	
Bob	30,66,28,82,18,78,59,6,72,22,54	
Ashley	17,21,2,8,54,10,4,15,28,13,8	

What is the median number of points scored by Bob?

6) Assistment #137507 "137507 - Median: Even Number of Values"

Below is a list of numbers.

[70, 22, 13, 42, 91, 12, 66, 60, 21, 40, 38, 10]

What is the **median** number in this list?

7) Assistment #137631 "137631 - Median: Odd Number of Values" Below is a list of numbers.

[1, 48, 76, 84, 23, 45, 21, 24, 34, 65, 36, 41, 56]

What is the **median** number in this list?

8) Assistment #137591 "137591 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[66, 12, 3, 4, 9, 56, 2, 8, 122]

What is the **median** number in this list?

9) Assistment #137582 "137582 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[13, 14.77, 23, 10.56, 8.45, 5.66, 20]

What is the median number in this list?

#### 10) Assistment #137647 "137647 - 56719 - Median with Context and Vertical Table"

Alex runs a hardware store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1121	
February	2503	
March	1926	
April	600	
May	1047	
June	901	
July	1507	
August	1636	
September	1002	
October	1017	
November	2209	
December	2057	

11) Assistment #137578 "137578 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[4.0035, 40.035, 0.40035, 4.0035, 0.040035, 0.0040035, 400.35]

What is the **median** number in this list?

12) Assistment #137612 "137612 - 56708 - Median: Even Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[1.33, 0.99, 3.85, 1.65, 2.11, 1.12, 4.51, 2.33, 2.69, 3.91]

What is the **median** number in this list?

#### 13) Assistment #137661 "137661 - 30369 - median table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player Number of points scored on the last eleven games

Jose	34,67,27,83,18,75,60,6,73,21,54
Beth	17,26,6,9,43,9,8,17,28,14,15

What is the median number of points scored by Jose ?

14) Assistment #137604 "137604 - 132173 - Median: Even Number of Values with Context"
 During a medical study, doctors recorded the heights of all their volunteers. Some of heights (in centimeters) are provided here. What is the median height of the volunteers as listed below?
 181, 187, 176, 175, 193, 201, 170, 195, 213, 171

15) Assistment #137579 "137579 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[10135, 11035, 10315, 51301, 30115, 30151, 11053]

What is the median number in this list?

## 16) Assistment #137664 "137664 - 56715 - Median: Odd Number of Values with Context"

During a medical study, doctors measured the heights of all their volunteers. Some of heights (in centimeters) are provided here. What is the median height of the volunteers as listed below?

181, 187, 179, 173, 193, 200, 170, 195, 170

17) Assistment #137636 "137636 - 56719 - Median with Context and Vertical Table"

Liz runs a hardware store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1119	
February	2507	
March	1920	
April	607	
May	1050	
June	903	
July	1504	
August	1635	
September 1005		
October 1019		
November	2208	
December	2054	

# Problem Set "Counting Methods - THE SKILL BUILDING SET" id:[15528]

### 1) Assistment #120292 ''120292 - Calvin is making ...''

Calvin is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make without sausage?

Pizza P	i's Pizzeria	\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Ori <mark>gina</mark> l

## 2) Assistment #119978 ''119978 - Jenny is ordering...''

Jenny is ordering a salad from the menu shown below. If she picks one item from each category, how many different salads can she make with peppers?

Gar	den ens ore	
Lettuce	Vegetable	Dressing
Iceberg	Tomatoes	Vinaigrette
Romaine	Carrots	Ranch
Bibb	Peppers	Caesar
	Onions	

# 3) Assistment #120307 ''120307 - Kaitlin is gettin...''

Kaitlin is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make without a large popcorn?

	Golden Reel Cinema	8
Popcorn	Snacks	Soda
Kiddie Medium Large Jumbo	Candy Bar Pretzel Hot Dog Ice Cream	Orange Soda Root Beer Ginger Ale

# 4) Assistment #120029 ''120029 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with peppers?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 5) Assistment #119962 "119962 - How many ways can..."

How many ways can the vases shown below be organized on the shelf if the red vase does not move?



# 6) Assistment #120023 ''120023 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with tomatoes?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 7) Assistment #119947 "119947 - Penny is going to..."

Penny is going to flip a coin 4 times. How many outcomes are there in which she gets tails a total of 3 times?

# 8) Assistment #119951 "119951 - Kenny is going to..."

Kenny is going to flip a coin 4 times. How many outcomes are there in which he gets heads a total of 0 times?

# 9) Assistment #120000 ''120000 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with ham?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 10) Assistment #119917 "119917 - Blair is making a..."

Blair is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make without pepperoni?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 11) Assistment #120022 "120022 - Patty is making a..."

Patty is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make with mushrooms?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 12) Assistment #120407 ''120407 - Nancy is getting ...''

Nancy is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make with an ice cream?

# Problem Set "Range - THE SKILL BUILDING SET" id:[8979]

# 1) Assistment #58435 ''58435 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 121?

52, 67, 27, 73, 24, 107, 84

85202

0 145

0 158

2) Assistment #58437 ''58437 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 129?

41, 55, 39, 67, 5, 101, 78 79 191 134 161

**3**) Assistment #58386 ''58386 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.67, 54.67, 32, 106, 6, 35, 143

# 4) Assistment #58442 ''58442 - 30370 - range-table-female''

The coach for the lacross Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Shaun	10, 6, 17, 14, 25, 18, 8, 4, 23, 10
Julia	16, 19, 6, 9, 9, 2, 15, 30, 13, 11

What is the **range** number of points scored by Julia?

5) Assistment Rachel's sco	<b>#58475 ''58475 - 57508 - Range, with Context, 8''</b> res in 8 math tests are shown below. What is the range of Rachel's scores?
	26, 31, 23, 29, 16, 24, 40, 48
6) Assistment	#58251 ''58251 - Range''
Calculate the	e range of the following numbers:
	52, 43, 3, 124, 78, 137
	52, 34, 9, 106, 84, 139, 106
8) Assistment What numbe	<b>#58420 ''58420 - 57507 - Range, Missing number, 10''</b> or should be added to the following list to get a range of 122?
	50, 53, 65, 38, 88, 120, 99, 131, 146
19	
23	
24	
) 31	

# 9) Assistment #58443 ''58443 - 30370 - range-table-female''

The coach for the ping-pong Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	16, 10, 19, 17, 20, 18, 13, 3, 26, 8
Amanda	18, 22, 5, 10, 12, 2, 21, 30, 16, 16

# What is the **range** number of points scored by Amanda?



#### 10) Assistment #58466 ''58466 - 57511 - Range, with Context, 6''

The All-USA Physics team coach needs to pick one of two people for the All-USA Physics team. Points obtained by Gary and Ross are given below.

What is the range of points obtained by Ross?

Gary	15, 8, 18, 18, 16, 18
Ross	25, 20, 14, 23, 15, 29

**11)** Assistment #58378 ''58378 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.33, 31.67, 27, 114, 4, 31, 133

12) Assistment #58488 ''58488 - 57509 - Range, with Context, 5'' Beth's scores in 5 history tests are shown below. What is the range of Beth's scores?

33, 20, 16, 52, 25

13) Assistment #58247 "58247 - Range"

Calculate the **range** of the following numbers:

54, 47, 12, 106, 91, 127

14) Assistment #58474 ''58474 - 57508 - Range, with Context, 8'' Beth's scores in 8 math tests are shown below. What is the range of Beth's scores?

27, 32, 24, 26, 11, 30, 37, 48



## 15) Assistment #58458 ''58458 - 57510 - Range, with Context, 7''

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Ross are given below.

What is the range of points obtained by Joe?

Joe	23, 28, 20, 12, 21, 19, 31
Ross	15, 9, 15, 19, 26, 16, 22

**16**) Assistment #58369 ''58369 - 27424 - Find the Range'' Calculate the **range** of the following numbers:

54, 30, 14, 112, 93, 147, 112

17) Assistment #58250 ''58250 - Range''

Calculate the **range** of the following numbers:

67, 37, 17, 118, 86, 137

## 18) Assistment #58399 "58399 - What number shoul..."

What number should be added to the following list to get a range of 128?

69, 46, 8, 124, 97

123137

0 136

0 151

#### 19) Assistment #58403 "58403 - What number shoul..."

What number should be added to the following list to get a range of 113?

59, 34, 15, 119, 77

0 118

0 129

- 128
- 0 140
#### Problem Set "Range - LEVEL 1 SKILL BUILDING" id:[14157]

#### 1) Assistment #111885 ''111885 - 57510 - Range, with Context, 7''

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Fleur are given below.

What is the range of points obtained by Joe?

Joe	23, 28, 18, 11, 23, 15, 32
Fleur	15, 7, 15, 22, 25, 16, 20

2) Assistment #111848 ''111848 - 57508 - Range, with Context, 8'' Amy's scores in 8 math tests are shown below. What is the range of Amy's scores?

23, 28, 22, 31, 15, 28, 42, 48

#### 3) Assistment #111971 "111971 - 30370 - range-table-female"

The coach for the darts Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Chris	16, 4, 12, 14, 23, 21, 8, 7, 22, 6
Liz	18, 24, 12, 8, 12, 2, 15, 31, 21, 15

What is the **range** number of points scored by Liz?

4) Assistment #111846 "111846 - 57508 - Range, with Context, 8"

Amy's scores in 8 math tests are shown below. What is the range of Amy's scores?

26, 31, 22, 27, 15, 28, 38, 49

5) Assistment #111880 "111880 - 57504 - Range, 7"

Calculate the **range** of the following numbers:

184.78, 64, 41, 112, 5, 38, 126

6) Assistment #111872 ''111872 - 57504 - Range, 7'' Calculate the range of the following numbers:

189.56, 42.67, 23, 118, 8, 45, 143

7) Assistment #111902 ''111902 - 57505 - Range, 9'' Calculate the range of the following numbers:

124, 50.33, 248.73, 37, 115, 33, 142, 3, 80.35

8) Assistment #111914 "111914 - Range"

Calculate the **range** of the following numbers:

67, 29, 2, 103, 90, 144

9) Assistment #111852 "111852 - 57508 - Range, with Context, 8" Rachel's scores in 8 math tests are shown below. What is the range of Rachel's scores?

22, 27, 21, 29, 14, 25, 40, 45

**10**) Assistment #111956 ''111956 - 27424 - Find the Range'' Calculate the range of the following numbers:

71, 34, 13, 121, 98, 140, 121

11) Assistment #111901 "111901 - 57505 - Range, 9"

Calculate the **range** of the following numbers:

130, 34.33, 256.09, 29, 102, 29, 143, 10, 86.35

#### 12) Assistment #111860 "111860 - 57509 - Range, with Context, 5"

Gary's scores in 5 geography tests are shown below. What is the range of Gary's scores?

32, 25, 15, 46, 25

#### 13) Assistment #111897 "111897 - 57510 - Range, with Context, 7"

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Ross are given below.

What is the range of points obtained by Joe?

Joe	24,	29,	20,	11,	21,	17,	33
Ross	18,	10,	14,	19,	25,	14,	22

#### 14) Assistment #111962 "111962 - 30370 - range-table-female"

The coach for the volleyball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Jose	10, 11, 14, 19, 26, 15, 13, 1, 23, 14
Beth	16, 26, 10, 11, 7, 2, 18, 30, 20, 10

What is the range number of points scored by Beth?

#### 15) Assistment #111937 "111937 - 57511 - Range, with Context, 6"

The basketball team coach needs to pick one of two people for the basketball team. Points obtained by Joe and Jess are given below.

What is the range of points obtained by Jess?

Joe	19, 7, 15, 21, 16, 19
Jess	28, 18, 12, 23, 18, 31

16) Assistment #111844 ''111844 - 57508 - Range, with Context, 8''

Amy's scores in 8 math tests are shown below. What is the range of Amy's scores?

22, 27, 26, 29, 16, 28, 40, 50

17) Assistment #111966 "111966 - 30370 - range-table-female"

The coach for the baseball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Eric	16, 10, 19, 17, 18, 23, 8, 3, 23, 8
Alexa	20, 20, 12, 11, 14, 1, 20, 31, 21, 13

What is the **range** number of points scored by Alexa?

#### 18) Assistment #111861 "111861 - 57509 - Range, with Context, 5"

Gary's scores in 5 english tests are shown below. What is the range of Gary's scores?

32, 24, 13, 46, 28

19) Assistment #111843 "111843 - 57508 - Range, with Context, 8"

Gary's scores in 8 math tests are shown below. What is the range of Gary's scores?

26, 31, 27, 27, 16, 30, 38, 46

20) Assistment #111845 ''111845 - 57508 - Range, with Context, 8''

Rachel's scores in 8 math tests are shown below. What is the range of Rachel's scores?

24, 29, 25, 30, 13, 27, 41, 50

# Problem Set "Angles - Obtuse, Acute and Right Angles - THE SKILL BUILDING SET" id:[9245]

# 1) Assistment #75194 ''75194 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?



2) Assistment #75184 ''75184 - 61814 - Obtuse angles'' Identify the type of the colored angle in the following figure?



# 3) Assistment #75202 ''75202 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?

1.



## **4)** Assistment #75167 ''75167 - 61813 - Right angles'' Identify the type of the colored angle in the following figure?



5) Assistment #75163 ''75163 - 61813 - Right angles'' Identify the type of the colored angle in the following figure?

- Acute Angle
- Obtuse Angle
- Right Angle

# 6) Assistment #75212 ''75212 - 61817 - 61816 - 61815 - select right''

Which of the following colored angles represents a right angle?



7) Assistment #75237 ''75237 - 61812 - Acute angles''

Identify the type of the colored angle in the following figure?



O Acute angle

- Right angle
- Obtuse angle

# 8) Assistment #75206 ''75206 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?



#### 9) Assistment #75149 ''75149 - 61815 - select acute'' Which of the following colored angles represents an acute angle?



Problem Set "Properties of Solids" id:[6150]

1) Assistment #42347 ''42347 - Properties of Solids - Number of Faces''

How many faces are there in a Diamond



**2**) Assistment #42343 "42343 - Properties of Solids - Number of Faces" How many faces are there in a Pentagon



**3**) Assistment #42345 "42345 - Properties of Solids - Number of Faces" How many faces are there in a Diamond



**4)** Assistment #42339 "42339 - Properties of Solids - Number of Faces" How many faces are there in a Pentagon



5) Assistment #42337 ''42337 - Properties of Solids - Number of Faces''

How many faces are there in a Diamond



6) Assistment #42354 "42354 - Properties of Solids - Number of Faces" How many faces are there in a Pyramid



7) Assistment #42340 "42340 - Properties of Solids - Number of Faces"

How many faces are there in a Pyramid



8) Assistment #42333 "42333 - Properties of Solids - Number of Faces" How many faces are there in a Pentagon





**9)** Assistment #42328 "42328 - Properties of Solids - Number of Faces" How many faces are there in a Triangular Prism



**10)** Assistment #42344 ''42344 - Properties of Solids - Number of Faces'' How many faces are there in a Pyramid



**11) Assistment #42342 ''42342 - Properties of Solids - Number of Faces''** How many faces are there in a Triangular Prism



# **12)** Assistment #42349 ''42349 - Properties of Solids - Number of Faces'' How many faces are there in a Pentagon





**13**) Assistment #42338 ''42338 - Properties of Solids - Number of Faces'' How many faces are there in a Triangular Prism



14) Assistment #42334 "42334 - Properties of Solids -Number of Faces"

#### Problem Set "Elapsed Time - LEVEL 2 SKILL BUILDING" id:[37824]

#### 1) Assistment #234450 ''234450 - Elapsed Time 3''

When Mary last checked the clock it was 6:51 pm. It is now 10:25 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

2) Assistment #234432 ''234432 - Elapsed Time 2''

When Mary last checked the clock it was 1:47 pm. It is now 3:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 3) Assistment #234394 "234394 - 215936 - Elapsed Time 1"

When Mark last checked his watch it was 1:00 pm. It is now 4:15 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 4) Assistment #234460 ''234460 - Elapsed Time 4''

When Travis last checked the clock it was 6:12 pm. It is now 10:42 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 5) Assistment #234391 "234391 - 215936 - Elapsed Time 1"

When Eddie last checked his watch it was 6:00 pm. It is now 8:53 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

6) Assistment #234483 ''234483 - Elapsed Time 4''

When Dan last checked the clock it was 1:14 pm. It is now 4:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

7) Assistment #234419 "234419 - Elapsed Time 2" When Rachel last checked the clock it was 2:20 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

8) Assistment #234407 "234407 - Elapsed Time 2" When Cindy last checked the clock it was 3:47 pm. It is now 6:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

9) Assistment #234388 "234388 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 1:00 pm. It is now 3:29 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**10)** Assistment #234475 "234475 - Elapsed Time 4" When Matt last checked the clock it was 5:17 pm. It is now 9:39 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**11) Assistment #234446 ''234446 - Elapsed Time 3''** When Anna last checked the clock it was 2:56 pm. It is now 6:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**12**) Assistment #234458 "234458 - Elapsed Time 3" When Beth last checked the clock it was 1:34 pm. It is now 5:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**13**) Assistment #234380 "234380 - 215936 - Elapsed Time 1" When Tony last checked his watch it was 5:00 pm. It is now 7:32 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

14) Assistment #234437 "234437 - Elapsed Time 3"

When Sarah last checked the clock it was 4:36 pm. It is now 8:10 pm. How much time has elapsed?

Answer: \_\_:\_\_ (hours:minutes)

15) Assistment #234436 ''234436 - Elapsed Time 3''

When Danielle last checked the clock it was 7:38 pm. It is now 10:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 16) Assistment #234471 ''234471 - Elapsed Time 4''

When Andrew last checked the clock it was 5:19 pm. It is now 8:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

17) Assistment #234384 "234384 - 215936 - Elapsed Time 1"

When Jeff last checked his watch it was 1:00 pm. It is now 3:20 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**18)** Assistment #234381 "234381 - 215936 - Elapsed Time 1" When Matt last checked his watch it was 7:00 pm. It is now 9:21 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

\_\_\_\_\_

**19) Assistment #234406 ''234406 - Elapsed Time 2''** When Cindy last checked the clock it was 2:31 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

20) Assistment #234386 "234386 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 7:00 pm. It is now 9:33 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**21)** Assistment #234456 ''234456 - Elapsed Time 3'' When Lindsay last checked the clock it was 7:45 pm. It is now 11:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

22) Assistment #234434 "234434 - Elapsed Time 3" When Kate last checked the clock it was 7:44 pm. It is now 11:13 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

Problem Set "Properties and Classification of Polygons With 5 Or More Sides - THE SKILL BUILDING SET"  ${\rm id}{\rm :}[24173]$ 

1) Assistment #144038 "144038 - 134809 - What is a Polygon? Check all that apply. (1correctpolygon)" Please select all of the shapes that are polygons.



2) Assistment #144017 "144017 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)" Please select all of the shapes that are polygons.





**3**) Assistment #143994 "143994 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)" Please select all of the shapes that are polygons.



# Assistment - Printing Content



**4)** Assistment #144106 "144106 - 143395 Convex/Concave Polygon (True or False)" Is the following statement true or false? This polygon is a "concave polygon".

False

True

5) Assistment #144006 ''144006 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)'' Please select all of the shapes that are polygons.



# Problem Set "Properties and Classification Quadrilaterals - THE SKILL BUILDING SET" id:[23755]

## 1) Assistment #143305 "143305 - Which of the foll..."

Which of the following figures are trapezoids? (Check all that apply)



2) Assistment #143325 "143325 - Given that the fo..."

Given that the following quadrilateral ABCD is a rhombus:



Which angle of the rhombus is congruent to angle A

BC

🔘 D

A

# 3) Assistment #143323 $^{\prime\prime}$ 143323 - Given that the fo..."

Given that the following quadrilateral ABCD is a rhombus:



Which angle of the rhombus is congruent to angle B

- CD
- A
- ) B

4) Assistment #143266 "143266 - Given that the fo..." Given that the following quadrilateral ABCD is a rhombus:



Which side of the rhombus is parallel to side BC?

- O BC
- O CD
- O AD
- AB

#### 5) Assistment #143233 "143233 - Given that the fo..."

Given that the following quadrilateral ABCD is a parallelogram:



- O AD
- O AB
- 🔘 BC
- CD

6) Assistment #143238 "143238 - Given that the fo..."

Given that the following quadrilateral ABCD is a parallelogram:



Which angle of the parallelogram is congruent to angle D

on angle A

o angle B

on angle C

angle D

7) Assistment #143254 "143254 - If the following ..."

If the following shape is a parallelogram:



If the length of the diagonal between points A and C is 6 units, what is the length of line segment AE?

8) Assistment #143287 "143287 - Given that the fo..." Given that the following quadrilateral ABCD is a rectangle: ASSISTMENTS.ORG

# Thinking with Mathematical Models

# Appendix of Student Work

Cristina Heffernan, Alexandra Birch, Quinten Palmer, and Jeffrey Namias Academic Year 2011 – 2012

This is a document of the Pretest, Posttest, Mid test, and all of the pre-requisite and off-topic skill builders used in the CMP Study. Academic Year 2011 – 2012.

#### Problem Set "Pretest of Thinking with Mathematical Models from WPI" id:[38165]

#### 1) Assistment #12809 "12809 - Thinking with Mathematical Models Investigation 1 #1"

An 8th grader in Mrs. Philips class made these patterns out of blocks. The first four images in the pattern are shown. Fill in the table with how many blocks are in each figure by looking at the pictures. What value should go in the shaded box in the table?



#### 2) Assistment #12841 "12841 - Thinking with Mathematical Models Investigation 1 #2"

An 8th grader in Mrs. Philips class made these patterns out of blocks. The first four images in the pattern are shown along with a table that shows how many blocks are needed for each figure.

Is the relationship between the figure numbers and the number of blocks linear?



# 3) Assistment #12842 ''12842 - Thinking with Mathematical Models Investigation 1 #3''

Which x-y graph correctly represents the data table above?



4) Assistment #12807 "12807 - Thinking with Mathematical Models Investigation 2 #1"

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash. The scatter plot shows the data they collected after 8 drops. Which of the above graphs shows the

model of a line that best fits the data?



5) Assistment #12806 ''12806 - Thinking with Mathematical Models Investigation 2 #2''

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash. The graph below shows the data they collected after 8 drops and the best fit line.

Finish the equation for the best fit line in terms of x:



#### 6) Assistment #12808 ''12808 - Thinking with Mathematical Models Investigation 2 #3''

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash.

The equation of the line of best fit for this data is y = 3/4 \* x + 1 where x is the height of the drop and y is the diameter of the splash. Use this equation to predict how many feet the diameter of the splash is; assuming the water balloon was dropped from 16 feet.

7) Assistment #12838 ''12838 - Thinking with Mathematical Models Investigation 2 #4''



Given the graph below, which of the equations represents the line that goes through point A and point B.

#### 8) Assistment #12839 ''12839 - Thinking with Mathematical Models Investigation 2 #5''

Tanika has saved \$200 for dance classes. She spends \$15 for each dance class. What equation gives  $\mathbf{t}$ , the money left in her savings, after she has taken  $\mathbf{d}$  dance classes?

- $\bigcirc$  t = 200 15d
- ◎ t = 200d 15
- ◎ t = d 200 \* 15
- 🔘 t = 200 15

#### 9) Assistment #12840 "12840 - Thinking with Mathematical Models Investigation 2 #6"

Tanika has saved \$200 for dance classes. She spends \$15 for each dance class. The equation that gives **t**, the money left in her savings, after she has taken **d** dance classes is: t = 200 - 15d

How many classes has she taken if she has \$95 left in her savings account?

10) Assistment #12843 "12843 - Thinking with Mathematical Models Investigation 3 #1"

The table above shows the length and width of a rectangle with area 40 square centimeters. What value should be in the shaded region of the table?

Rectangle	with	area	40	$cm^2$
Neclanyle	VVILII	aica	40	GIII

Length (cm)	1	2	4	5	8
Width (cm)	40	20	10	8	

#### 11) Assistment #12844 ''12844 - Thinking with Mathematical Models Investigation 3 #2''

The table above shows the length and width of five rectangles with an area of 40 square centimeters. Which equation shows the relationship between length  $\mathbf{l}$  and width  $\mathbf{w}$ ?

Rectangle with area 40 cm <sup>2</sup>							
Length (cm) 1 2 4 5 8							
Width (cm)	40	20	10	8	5		

 $\bigcirc 1 / w = 40$ 

- $\bigcirc \ w \ / \ l = 40$
- 1 \* w = 40
- ◎ 1 = 40

12) Assistment #12845 ''12845 - Thinking with Mathematical Models Investigation 3 #3''

A	Х	0	1	2	3	4	5	
	Y	3	6	16	19	21	35	
P	X	0	5	10	20	30	40	
В	Y	7	17	27	47	67	87	
	Х	1	2	3	4	5	6	
C	Y	16	8	6	5	3	1	
	Х	2	4	6	8	10	12	
D	Y	24	12	8	6	4.8	4	
<ul> <li>A</li> <li>B</li> <li>C</li> <li>D</li> </ul>								

\_\_\_\_

Which of the four tables shows an **inversely proportional** relationship between the variables  $\mathbf{x}$  and  $\mathbf{y}$ ?

\_\_\_\_\_

13) Assistment #12846 "12846 - Thinking with Mathematical Models Investigation 3 #4"

А	Х	0	1	2	3	4	5
	Y	3	6	16	19	21	35
D	X	0	5	10	20	30	40
В	Y	7	17	27	47	67	87
0	Х	1	2	3	4	5	6
C	Y	16	8	6	5	3	1
	Х	2	4	6	8	10	12
D	Y	24	12	8	6	4.8	4
A							
© В							
© C							
) D							

Which of the four tables above shows a **linear** relationship between the variables **x** and **y**?

14) Assistment #236808 "236808 - 224053 - Subtracting Mixed Numbers" Find the difference:

$$9^{\frac{1}{-}}_{4} - 5^{\frac{7}{-}}_{12}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**15)** Assistment #99195 ''99195 - Addition-Integers: negative + positive'' What is (-14) + 10?

16) Assistment #226705 ''226705 - 214631 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM!  $2 \times 1$ 

3 4	
<b>17) Assistment #9</b> What is 25 ÷ (-5	9263 ''99263 - 27443 - Division-Integers: positive / negative : Easy using table'' 5)?
18) Assistment #8 Write a linear ec	<b>9965 ''89965 - 69710 - Write Linear Equation from Ordered Pairs''</b> quation for the line going through the points (-14, -12) and (-9, 3)
Write your equa	tion in the form y =
19) Assistment #2 A phone compar	<b>04752 ''204752 - 61768 - Linear Equation from Situation Phone''</b> ny charges a connection fee of \$0.67 and a variable cost per minute of \$0.08 for a call.
Assume the num Find 'v' the cost	the of minutes is your independent variable (x) and the cost is your dependent variable (y).
Write your equa	tion in the form $y = $
<b>20) Assistment #1</b> Write an equation	<b>03994 ''103994 - Algebra1 Equation from Slope and Y-intercept Mastery Learning''</b> on in the form "y=" using the following information about the equation:
Slope of the equ	ation: 6/8
Y-intercept of th	ne equation: 7
Use x as the inde	ependent variable.
21) Assistment #6 Choose the answ A)	<b>4197 ''64197 - 57849 - Recognizing Linear Functions''</b> ver that describes the two graphs shown below: <b>B</b> )



- OBoth are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

#### 22) Assistment #73939 ''73939 - Algebra1 Finding Y-intercept from Linear Equation''

Determine the y-intercept from the following equation: y = (3/5)x + 2

#### 23) Assistment #112265 ''112265 - Dividing Fractions Template''

	14	8
What is the quotient of	÷	2?
	17	11

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

#### Problem Set "Midtest of Thinking with Mathematical Models from WPI" id:[38166]

1) Assistment #236814 "236814 - 224053 - Subtracting Mixed Numbers" Find the difference:


7) Assistment #103996 "103996 - Algebra1 Equation from Slope and Y-intercept Mastery Learning"

Write an equation in the form "y=\_\_\_\_\_" using the following information about the equation:

Slope of the equation: 3/2

Y-intercept of the equation: 10

Use x as the independent variable.

#### 8) Assistment #64247 "64247 - 57752 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below:

B)

A)



- OBoth are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

# 9) Assistment #73947 ''73947 - Algebra1 Finding Y-intercept from Linear Equation''

Determine the y-intercept from the following equation: y = (1/9)x + 10

#### 10) Assistment #112266 "112266 - Dividing Fractions Template"

	11	6
What is the quotient of	÷	2?
	12	11

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

## Problem Set "Posttest of Thinking with Mathematical Models from WPI" id:[38170]

#### 1) Assistment #12809 "12809 - Thinking with Mathematical Models Investigation 1 #1"

An 8th grader in Mrs. Philips class made these patterns out of blocks. The first four images in the pattern are shown. Fill in the table with how many blocks are in each figure by looking at the pictures. What value should go in the shaded box in the table?



#### 2) Assistment #12841 ''12841 - Thinking with Mathematical Models Investigation 1 #2''

An 8th grader in Mrs. Philips class made these patterns out of blocks. The first four images in the pattern are shown along with a table that shows how many blocks are needed for each figure.

Is the relationship between the figure numbers and the number of blocks linear?



# 3) Assistment #12842 ''12842 - Thinking with Mathematical Models Investigation 1 #3''

Which x-y graph correctly represents the data table above?



4) Assistment #12807 "12807 - Thinking with Mathematical Models Investigation 2 #1"

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash. The scatter plot shows the data they collected after 8 drops. Which of the above graphs shows the

model of a line that best fits the data?



5) Assistment #12806 ''12806 - Thinking with Mathematical Models Investigation 2 #2''

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash. The graph below shows the data they collected after 8 drops and the best fit line.

Finish the equation for the best fit line in terms of x:



### 6) Assistment #12808 ''12808 - Thinking with Mathematical Models Investigation 2 #3''

Jill's science class was dropping water balloons from different heights and measuring the diameter of the splash.

The equation of the line of best fit for this data is y = 3/4 \* x + 1 where x is the height of the drop and y is the diameter of the splash. Use this equation to predict how many feet the diameter of the splash is; assuming the water balloon was dropped from 16 feet.

7) Assistment #12838 ''12838 - Thinking with Mathematical Models Investigation 2 #4''



Given the graph below, which of the equations represents the line that goes through point A and point B.

## 8) Assistment #12839 ''12839 - Thinking with Mathematical Models Investigation 2 #5''

Tanika has saved \$200 for dance classes. She spends \$15 for each dance class. What equation gives  $\mathbf{t}$ , the money left in her savings, after she has taken  $\mathbf{d}$  dance classes?

- $\bigcirc$  t = 200 15d
- ◎ t = 200d 15
- ◎ t = d 200 \* 15
- 🔘 t = 200 15

## 9) Assistment #12840 "12840 - Thinking with Mathematical Models Investigation 2 #6"

Tanika has saved \$200 for dance classes. She spends \$15 for each dance class. The equation that gives **t**, the money left in her savings, after she has taken **d** dance classes is: t = 200 - 15d

How many classes has she taken if she has \$95 left in her savings account?

10) Assistment #12843 "12843 - Thinking with Mathematical Models Investigation 3 #1"

The table above shows the length and width of a rectangle with area 40 square centimeters. What value should be in the shaded region of the table?

Rectangle	with	area	40	$cm^2$
Neclangle	VVILII	aica	40	GIII

Length (cm)	1	2	4	5	8
Width (cm)	40	20	10	8	

## 11) Assistment #12844 ''12844 - Thinking with Mathematical Models Investigation 3 #2''

The table above shows the length and width of five rectangles with an area of 40 square centimeters. Which equation shows the relationship between length  $\mathbf{l}$  and width  $\mathbf{w}$ ?

Recta	angle	with	area	40 cn	n²
Length (cm)	1	2	4	5	8
Width (cm)	40	20	10	8	5

 $\bigcirc 1 / w = 40$ 

- $\bigcirc \ w \ / \ l = 40$
- $\bigcirc 1 * w = 40$
- ◎ 1 = 40

12) Assistment #12845 ''12845 - Thinking with Mathematical Models Investigation 3 #3''

٨	Х	0	1	2	3	4	5	
A	Y	3	6	16	19	21	35	
P	X	0	5	10	20	30	40	
В	Y	7	17	27	47	67	87	
0	Х	1	2	3	4	5	6	
C	Y	16	8	6	5	3	1	
	Х	2	4	6	8	10	12	
D	Y	24	12	8	6	4.8	4	
<ul> <li>A</li> <li>B</li> <li>C</li> <li>D</li> </ul>								

-----

Which of the four tables shows an **inversely proportional** relationship between the variables  $\mathbf{x}$  and  $\mathbf{y}$ ?

\_\_\_\_\_

13) Assistment #12846 "12846 - Thinking with Mathematical Models Investigation 3 #4"

٨	Х	0	1	2	3	4	5
A	Y	3	6	16	19	21	35
P	X	0	5	10	20	30	40
В	Y	7	17	27	47	67	87
0	Х	1	2	3	4	5	6
C	Y	16	8	6	5	3	1
	X	2	4	6	8	10	12
D	Y	24	12	8	6	4.8	4
<ul> <li>A</li> <li>B</li> <li>C</li> <li>D</li> </ul>							

Which of the four tables above shows a **linear** relationship between the variables  $\mathbf{x}$  and  $\mathbf{y}$ ?

**14**) Assistment #236819 "236819 - 224053 - Subtracting Mixed Numbers" Find the difference:

$$10 \frac{1}{-} - 9 \frac{7}{-}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**15)** Assistment #99199 "99199 - Addition-Integers: negative + positive" What is (-13) + 8?

16) Assistment #226707 ''226707 - 214631 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM!  $2 \times 5$ 

3	12		
<b>17) Assist</b> What is	ment <b>#99265 ''99</b> 10 ÷ (-1)?	9265 - 27443 - Division-Ir	ntegers: positive / negative : Easy using table''
18) Assist Write a 1	ment #89971 ''89	9971 - 69710 - Write Line for the line going throug	ear Equation from Ordered Pairs'' th the points (-3, 3) and (-4, -9)
Write yo	our equation in the	he form y =	
<b>19) Assist</b> A phone	ment #204754 "2 company charg	204754 - 61768 - Linear F ges a connection fee of \$	Equation from Situation Phone'' 51.28 and a variable cost per minute of \$0.22 for a call.
Find 'y',	the cost of a pho	one call that lasts x min	utes.
Write yo	our equation in the	he form y =	
<b>20) Assist</b> Write an	ment #103999 "1 equation in the	<b>103999 - Algebra1 Equat</b> form "y=	ion from Slope and Y-intercept Mastery Learning'' " using the following information about the equation:
Slope of	the equation: 10	0/2	
Use x as	the independen	t variable.	
21) Assist Choose A)	ment #64199 ''64 the answer that c	<b>4199 - 57849 - Recognizir</b> describes the two graphs <b>B</b> )	ng Linear Functions'' s shown below:



- Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

22) Assistment #73950 ''73950 - Algebra1 Finding Y-intercept from Linear Equation''

Determine the y-intercept from the following equation: y = (4/9)x + 4

## 23) Assistment #112276 "112276 - Dividing Fractions Template"

What is the quotient of

 $\frac{7}{17} \div 4 \frac{8}{-?}$ 

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

#### Problem Set "Adding and Subtracting Fractions - THE SKILL BUILDING SET" id:[37994]

1) Assistment #236887 "236887 - Subtracting Proper Fractions" Find the difference:

> 8 7 - - -9 8

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

2) Assistment #237002 "237002 - Adding Mixed Numbers" Find the sum:

$$9 \frac{4}{-11} + 10 \frac{9}{-11}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

3) Assistment #236966 ''236966 - 229272 - Subtracting Mixed Numbers'' Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

4) Assistment #236866 ''236866 - 224054 - Subtracting Mixed Numbers'' Find the difference:

 $8 \frac{2}{9} - 2 \frac{2}{7}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

http://assistments.org/build/print/sequence/37994?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

5) Assistment #236833 "236833 - 229256 - Subtracting Proper Fractions" Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

6) Assistment #236818 ''236818 - 224053 - Subtracting Mixed Numbers'' Find the difference:

4 - 3 - 4 - 1 - 1 - 10

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

7) Assistment #236897 "236897 - 231574 - Subtracting Mixed Numbers" Find the difference:

$$11 - 7\frac{1}{8}$$

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

8) Assistment #236930 "236930 - 224085 - Adding Proper Fractions" Find the sum:

 $\begin{array}{cccc}
 1 & 3 \\
 - & + & - \\
 8 & 10
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

9) Assistment #236990 "236990 - Adding Proper Fractions" Find the sum:  $\begin{array}{cccc}
 1 & 3 \\
 - & + & - \\
 3 & 4
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**10**) Assistment #236974 "236974 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

11) Assistment #236940 "236940 - 224085 - Adding Proper Fractions" Find the sum:

 $\begin{array}{rrr}
 7 & 9 \\
 - & + & - \\
 12 & 10
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**12)** Assistment #236850 "236850 - Subtracting Proper Fractions" Find the difference:

 $\begin{array}{cccc}
 1 & 1 \\
 - & - \\
 10 & 30
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**13**) Assistment #236978 "236978 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**14**) Assistment #236827 ''236827 - 229256 - Subtracting Proper Fractions'' Find the difference:

 $\begin{array}{cccc}
 1 & 1 \\
 - & - \\
 4 & 6
 \end{array}$ 

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

15) Assistment #236861 "236861 - 224054 - Subtracting Mixed Numbers" Find the difference:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

**16)** Assistment #236926 ''236926 - 229270 - Adding Mixed Numbers'' Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

17) Assistment #236986 "236986 - Adding Proper Fractions" Find the sum:

Answers must be in the form of a <u>reduced proper fraction</u> (example 2/7) or a <u>mixed number</u> with a space between the whole number and the fraction (example 35/8)

Problem Set "Addition and Subtraction Integers - THE SKILL BUILDING SET" id:[11898]

1) Assistment #99173 ''99173 - Addition-Integers: negative + positive'' What is (-11) + 8?

2) Assistment #99228 "99228 - Subtraction Integers : positive minus negative" What is 21 - (-9)?

3) Assistment #99259 "99259 - Subtraction - Integers : negative minus negative" What is (-6) - (-5)?

**4**) Assistment #99155 "99155 - 27372 - Addition-Integers: positive + negative" What is **1** + (-14)?

5) Assistment #99193 ''99193 - Addition-Integers: negative + positive'' What is (-21) + 3?

6) Assistment #99158 "99158 - 27372 - Addition-Integers: positive + negative" What is 19 + (-1)?

7) Assistment #99162 ''99162 - 27372 - Addition-Integers: positive + negative'' What is 16 + (-2)?

8) Assistment #99172 ''99172 - 27372 - Addition-Integers: positive + negative'' What is 2 + (-9)?

9) Assistment #99196 "99196 - Addition-Integers: negative + positive" What is (-6) + 20?

**10**) Assistment #99232 "99232 - Subtraction Integers : positive minus negative" What is 5 - (-10)?

**11)** Assistment #99242 "99242 - Subtraction - Integers : negative minus negative" What is (-8) - (-5)?

**12)** Assistment #99163 ''99163 - 27372 - Addition-Integers: positive + negative'' What is 4 + (-4)?

**13**) Assistment #99233 "99233 - Subtraction - Integers : negative minus negative" What is (-16) - (-8)?

**14)** Assistment #99174 "99174 - Addition-Integers: negative + positive" What is (-6) + 1?

**15**) Assistment #99238 "99238 - Subtraction - Integers : negative minus negative" What is (-2) - (-19)?

**16)** Assistment #99207 ''99207 - Subtraction Integers : positive minus negative'' What is 17 - (-18)?

**17**) Assistment #99197 ''99197 - Addition-Integers: negative + positive'' What is (-11) + 7?

**18)** Assistment #99217 ''99217 - Subtraction Integers : positive minus negative'' What is 3 - (-17)?

http://assistments.org/build/print/sequence/11898?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

**19**) Assistment #99253 ''99253 - Subtraction - Integers : negative minus negative'' What is (-12) - (-12)?

**20)** Assistment #99150 ''99150 - 27372 - Addition-Integers: positive + negative'' What is 7 + (-6)?

**21**) Assistment #99205 - Subtraction Integers : positive minus negative'' What is 7 - (-12)?

22) Assistment #99195 ''99195 - Addition-Integers: negative + positive'' What is (-14) + 10?

23) Assistment #99190 "99190 - Addition-Integers: negative + positive" What is (-10) + 20?

24) Assistment #99234 ''99234 - Subtraction - Integers : negative minus negative'' What is (-11) - (-11)?

**25)** Assistment #99200 "99200 - Addition-Integers: negative + positive" What is (-1) + 3?

**26)** Assistment #99164 ''99164 - 27372 - Addition-Integers: positive + negative'' What is 20 + (-1)?

27) Assistment #99209 ''99209 - Subtraction Integers : positive minus negative'' What is 11 - (-4)?

http://assistments.org/build/print/sequence/11898?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

28) Assistment #99170 ''99170 - 27372 - Addition-Integers: positive + negative'' What is 1 + (-7)?

**29**) Assistment **#99243** "**99243** - Subtraction - Integers : negative minus negative" What is (-20) - (-11)?

**30)** Assistment #99254 "99254 - Subtraction - Integers : negative minus negative" What is (-13) - (-17)?

**31)** Assistment **#99178 ''99178 - Addition-Integers: negative + positive''** What is (-6) + 8?

**32)** Assistment #99182 "99182 - Addition-Integers: negative + positive" What is (-2) + 7?

**33**) Assistment #99246 "99246 - Subtraction - Integers : negative minus negative" What is (-12) - (-12)?

**34)** Assistment #99147 ''99147 - 27372 - Addition-Integers: positive + negative'' What is **8** + (-16)?

**35)** Assistment #99226 - Subtraction Integers : positive minus negative'' What is **3** - (-1)?

**36)** Assistment **#99211 ''99211 - Subtraction Integers : positive minus negative''** What is **18** - (-6)?

## Problem Set "Multiplication Fractions - THE SKILL BUILDING SET" id:[37091]

#### 1) Assistment #226766 ''226766 - 217359 - Multiplying Fractions(M/W)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 3 5/6.



## 2) Assistment #226748 "226748 - Multiplying Fractions(OC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 9 7--- x

	Х		
35		10	

#### 3) Assistment #226756 "226756 - Multiplying Fractions(OC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 1 7



#### 4) Assistment #226802 ''226802 - 217983 - Multiplying Fraction(MP)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 2 2/9.



## 5) Assistment #226763 ''226763 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 3 8 3 8



#### 6) Assistment #226758 "226758 - Multiplying Fractions(OC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM!

 $\begin{array}{ccc} 2 & 7 \\ \hline 7 & 9 \\ \hline \end{array}$ 

## 7) Assistment #226785 ''226785 - 217983 - Multiplying Fraction(MP)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 2 2/9.

 $4 \frac{4}{9} \times \frac{6}{7}$ 

#### 8) Assistment #226772 ''226772 - 217359 - Multiplying Fractions(M/W)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 3 5/6.



## 9) Assistment #226739 ''226739 - Multiplying Fraction(NC)''

Calculate the product of the followiing two fractions and make sure your answer is in SIMPLEST FORM!



#### 10) Assistment #226810 ''226810 - 220065 - Multiplying Fraction(M/M)''

Calculate the product of the followiing and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 4 1/2.

 $4 \frac{5}{7} \times 4 \frac{5}{8}$ 

## 11) Assistment #226780 ''226780 - 217983 - Multiplying Fraction(MP)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the

whole number and the fraction parts. Example: 2 2/9.



## 12) Assistment #226732 "226732 - Multiplying Fraction(NC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM!  $7 \quad 4$  $--- \quad x \quad ---$ 



## 13) Assistment #226715 ''226715 - 214631 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 2 5



## 14) Assistment #226740 "226740 - Multiplying Fraction(NC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 5 5



## 15) Assistment #226753 "226753 - Multiplying Fractions(OC)"

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 5 4



## 16) Assistment #226716 ''226716 - 214631 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 4 3

7 8

## 17) Assistment #226812 ''226812 - 220065 - Multiplying Fraction(M/M)''

Calculate the product of the followiing and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 4 1/2.

2 6 x 2 3



## 18) Assistment #226735 ''226735 - Multiplying Fraction(NC)''

Calculate the product of the followiing two fractions and make sure your answer is in SIMPLEST FORM!

 $\begin{array}{c}
8 \\
9 \\
9 \\
9
\end{array}$ 

## 19) Assistment #226742 "226742 - Multiplying Fraction(NC)"

Calculate the product of the followiing two fractions and make sure your answer is in SIMPLEST FORM!



**20**) Assistment #226767 ''226767 - 217359 - Multiplying Fractions(M/W)'' Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 3 5/6.

$$3 \frac{5}{-11} \times 4$$

21) Assistment #226793 ''226793 - 217983 - Multiplying Fraction(MP)''

Calculate the product of the following and make sure your answer is in SIMPLEST FORM!

If your answer is an improper fraction, submit your answer as a mixed number with a space between the whole number and the fraction parts. Example: 2 2/9.



22) Assistment #226707 ''226707 - 214631 - Multiplying Fractions(OC)''

Calculate the product of the following two fractions and make sure your answer is in SIMPLEST FORM! 2 5



23) Assistment #226765 ''226765 - 217359 - Multiplying Fractions(M/W)''

Problem Set "Multiplication and Division Integers - THE SKILL BUILDING SET" id:[11899]

1) Assistment #99288 ''99288 - 27443 - Division-Integers: positive / negative : Easy using table'' What is  $18 \div (-9)$ ?

2) Assistment #99372 ''99372 - Division-Integers: negative / positive : Easy using table'' What is  $(-64) \div 8$ ?

3) Assistment #99306 ''99306 - 27632 - Multiplication-Integers: Positive Times Negative'' What is 5 • (-10)?

4) Assistment #99358 "99358 - Division-Integers: negative / positive : Easy using table" What is (-45) ÷ 9?

5) Assistment #99332 ''99332 - Multiplication - Integers: Negative times Negative'' What is (-6) • (-5)?

6) Assistment #99283 "99283 - 27443 - Division-Integers: positive / negative : Easy using table" What is  $27 \div (-9)$ ?

7) Assistment #99374 ''99374 - Division-Integers: negative / positive : Easy using table'' What is  $(-63) \div 9$ ?

8) Assistment #99354 ''99354 - Division-Integers: negative / positive : Easy using table'' What is  $(-16) \div 4$ ?

9) Assistment #99275 ''99275 - 27443 - Division-Integers: positive / negative : Easy using table'' What is  $100 \div (-10)$ ?

10) Assistment #99370 ''99370 - Division-Integers: negative / positive : Easy using table'' What is  $(-24) \div 3$ ?

http://assistments.org/build/print/sequence/11899?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

	9312 - 27632 - Multiplication-Integers: Positive Times Negative''
What is $5 \cdot (-1)$ ?	
<b>2) Assistment #99277 ''9</b> What is 42 ÷ (-7)?	9277 - 27443 - Division-Integers: positive / negative : Easy using table''
<b>(3)</b> Assistment <b>#99292 "9</b> What is 3 • (-9)?	9292 - 27632 - Multiplication-Integers: Positive Times Negative''
14) Assistment #99331 ''9 What is (-6) • (-8)?	9331 - Multiplication - Integers: Negative times Negative''
<b>15) Assistment #99304 ''9</b> What is 3 • (-7)?	9304 - 27632 - Multiplication-Integers: Positive Times Negative''
<b>16) Assistment #99352 ''9</b> What is (-50) ÷ 10?	9352 - Division-Integers: negative / positive : Easy using table''
17) Assistment #99329 ''9 What is (-5) • (-4)?	9329 - Multiplication - Integers: Negative times Negative''
<b>18) Assistment #99314 ''9</b> What is 1 • (-6)?	9314 - 27632 - Multiplication-Integers: Positive Times Negative''
<b>19) Assistment #99303 ''9</b> What is 10 • (-9)?	9303 - 27632 - Multiplication-Integers: Positive Times Negative''

21) Assistment #99368 ''99368 - Division-Integers: negative / positive : Easy using table'' What is  $(-18) \div 2$ ?

22) Assistment #99321 ''99321 - Multiplication - Integers: Negative times Negative'' What is (-7) • (-9)?

23) Assistment #99351 ''99351 - Division-Integers: negative / positive : Easy using table'' What is  $(-3) \div 1$ ?

24) Assistment #99290 ''99290 - 27632 - Multiplication-Integers: Positive Times Negative'' What is 7 • (-5)?

25) Assistment #99349 "99349 - Division-Integers: negative / positive : Easy using table" What is  $(-12) \div 2$ ?

26) Assistment #99309 ''99309 - 27632 - Multiplication-Integers: Positive Times Negative'' What is 9 • (-6)?

27) Assistment #99281 ''99281 - 27443 - Division-Integers: positive / negative : Easy using table'' What is  $63 \div (-7)$ ?

**28)** Assistment #99373 ''99373 - Division-Integers: negative / positive : Easy using table'' What is  $(-8) \div 2$ ?

**29**) Assistment #99333 ''99333 - Multiplication - Integers: Negative times Negative'' What is (-6) • (-4)?

30) Assistment #99287 ''99287 - 27443 - Division-Integers: positive / negative : Easy using table'' What is  $4 \div (-2)$ ?

31) Assistment #99364 ''99364 - Division-Integers: negative / positive : Easy using table'' What is  $(-80) \div 8$ ?

<b>32) Assistment #99328 ''99</b> What is (-5) • (-2)?	328 - Multiplication - Integers: Negative times Negative''
<b>33) Assistment #99282 ''99</b> What is 4 ÷ (-2)?	282 - 27443 - Division-Integers: positive / negative : Easy using table''
<b>34) Assistment #99320 ''99</b> What is (-2) • (-9)?	320 - Multiplication - Integers: Negative times Negative''
<b>35) Assistment #99307 ''99</b> What is 9 • (-3)?	307 - 27632 - Multiplication-Integers: Positive Times Negative''
<b>36) Assistment #99284 ''99</b> What is <b>36</b> ÷ (-4)?	284 - 27443 - Division-Integers: positive / negative : Easy using table''
<b>37) Assistment #99286 ''99</b> What is <b>18</b> ÷ (-9)?	286 - 27443 - Division-Integers: positive / negative : Easy using table''
<b>38) Assistment #99347 ''99</b> What is (-1) • (-2)?	347 - Multiplication - Integers: Negative times Negative''
<b>39) Assistment #99308 ''99</b> What is 9 • (-10)?	308 - 27632 - Multiplication-Integers: Positive Times Negative''
<b>40) Assistment #99269 ''99</b> What is <b>49</b> ÷ (-7)?	269 - 27443 - Division-Integers: positive / negative : Easy using table''
<b>41</b> ) Assistment #99339 ''99 What is (-5) • (-7)?	339 - Multiplication - Integers: Negative times Negative''

http://assistments.org/build/print/sequence/11899?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

Problem Set "Write Linear Equation from Ordered Pairs - THE SKILL BUILDING SET" id:[10597]

1) Assistment #89989 ''89989 - Write Linear Equation from X and Y Intercepts''

Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation:

X-intercept of the equation: 4 Y-intercept of the equation: 10

**2**) Assistment #89995 ''89995 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (6, -34) and (0, 2)

Write your equation in the form y = \_\_\_\_\_

**3)** Assistment #89998 ''89998 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (-4, 8) and (-2, -10)

Write your equation in the form y = \_\_\_\_\_

4) Assistment #89992 ''89992 - Write Linear Equation from X and Y Intercepts''

Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation:

X-intercept of the equation: 10 Y-intercept of the equation: 4

**5**) Assistment #89966 ''89966 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (8, 19) and (6, 7)

Write your equation in the form y = \_\_\_\_\_

**6**) Assistment #90006 ''90006 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (14, -120) and (6, 0)

Write your equation in the form y = \_\_\_\_\_

7) Assistment #90008 ''90008 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (-11, 61) and (-4, -9)

Write your equation in the form y = \_\_\_\_\_

8) Assistment #89959 ''89959 - 69710 - Write Linear	<b>Equation from Ordered Pairs''</b> the points (-2, -55) and (4, -7)
Write your equation in the form y =	
9) Assistment #89990 ''89990 - Write Linear Equatio	an from X and V Intercents''
Write a linear equation in the form $"y = \_$ equation:	" using the following information about the
X-intercept of the equation: 10	
Y-intercept of the equation: 10	
<b>10</b> ) Assistment #90029 ''90029 - Write Linear Equati Write a linear equation in the form "y = equation:	ion from X and Y Intercepts" " using the following information about the
X-intercept of the equation: 7 Y-intercept of the equation: -8	
11) Assistment #89972 ''89972 - 69710 - Write Linear	r Equation from Ordered Pairs''
write a linear equation for the line going through	the points $(7, -19)$ and $(9, 1)$
Write your equation in the form y =	
12) Assistment #89980 ''89980 - 69710 - Write Linear	r Equation from Ordered Pairs''
Write a linear equation for the line going through	the points (6, 30) and (1, -5)
Write your equation in the form y =	
13) Assistment #00035 ''00035 - Write Lineer Equati	ion from X and V Intercente''
Write a linear equation in the form " $y = $ equation:	" using the following information about the
X-intercept of the equation: 8 Y-intercept of the equation: -4	

14) Assistment #89965 ''89965 - 69710 - Write Linear Equation from Ordered Pairs''

Write a linear equation for the line going through the points (-14, -12) and (-9, 3)

Write your equation in the form y = \_\_\_\_\_

15) Assistment #90037 ''90037 - Write Linear Equation from X and Y Intercepts'' Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation: X-intercept of the equation: 10 Y-intercept of the equation: -8 16) Assistment #90009 ''90009 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (-2, -7) and (-6, 9)Write your equation in the form y =17) Assistment #90019 "90019 - Write Linear Equation from X and Y Intercepts" Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation: X-intercept of the equation: -4 Y-intercept of the equation: -2 18) Assistment #90036 ''90036 - Write Linear Equation from X and Y Intercepts'' Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation: X-intercept of the equation: 4 Y-intercept of the equation: -9 19) Assistment #90016 ''90016 - 69710 - Write Linear Equation from Ordered Pairs'' Write a linear equation for the line going through the points (-3, 17) and (5, 9)Write your equation in the form y = \_\_\_\_\_ 20) Assistment #90039 "90039 - Write Linear Equation from X and Y Intercepts" Write a linear equation in the form "y = \_\_\_\_\_" using the following information about the equation: X-intercept of the equation: -2 Y-intercept of the equation: 2

Write your equation in the form $y = $	
2) Assistment #90023 ''90023 - Write Linear Equation Write a linear equation in the form "y = equation:	n from X and Y Intercepts''" using the following information about the
Y-intercept of the equation: -8 Y-intercept of the equation: -4	
<b>3) Assistment #90004 ''90004 - 69710 - Write Linear</b> I Write a linear equation for the line going through the	Equation from Ordered Pairs'' the points (-11, 29) and (-1, -1)
Write your equation in the form y =	
<b>4) Assistment #90030 ''90030 - Write Linear Equation</b> Write a linear equation in the form "y =equation:	n from X and Y Intercepts" " using the following information about the
X-intercept of the equation: 9 Y-intercept of the equation: -5	
5) Assistment #90028 ''90028 - Write Linear Equation Write a linear equation in the form ''y = equation:	n from X and Y Intercepts''" using the following information about the
X-intercept of the equation: 10 Y-intercept of the equation: -6	
6) Assistment #90025 ''90025 - Write Linear Equation	n from X and Y Intercepts"
equation:	
X-intercept of the equation: -4 Y-intercept of the equation: -9	
7) Assistment #90003 ''90003 - 69710 - Write Linear I	Equation from Ordered Pairs''

## Problem Set "Write Linear Equation From Situation - THE SKILL BUILDING SET" id:[34265]

### 1) Assistment #204846 "204846 - Linear Equation from Situation Submarine"

A submarine is being tracked underwater. At the beginning of the tracking the submarine is at a depth of 363 feet below sea level.

The submarine is descending at 100 feet per minute.

Assume the number of minutes is your independent variable (x) and the depth is your dependent variable (y).

Find 'y', the depth of the submarine after x minutes

Write your equation in the form y =\_\_\_\_\_.

2) Assistment #204837 "204837 - Linear Equation from Situation Submarine"

A submarine is being tracked underwater. At the beginning of the tracking the submarine is at a depth of 153 feet below sea level.

The submarine is descending at 19 feet per minute.

Assume the number of minutes is your independent variable (x) and the depth is your dependent variable (y).

Find 'y', the depth of the submarine after x minutes

Write your equation in the form y = \_\_\_\_\_

3) Assistment #204829 "204829 - Linear Equation from Situation Freezer"

A deep freezer has a temperature of  $-7^{\circ}C$  when it is turned off.

The temperature then rises at 3.7°C per minute.

Assume the number of minutes is your independent variable (x) and the current temperature is your dependent variable (y)

Find 'y', the current temperature of the freezer after x minutes

Write your equation in the form y = \_\_\_\_\_

4) Assistment #204785 ''204785 - Linear Equation from Situation Bank''

A bank account currently has a balance of \$4130.

Each month, \$7 is withdrawn to pay for a monthy magazine subscription. No other transactions take place.

Assume the number of months is your independent variable (x) and the balance is your dependent variable (y).

http://assistments.org/build/print/sequence/34265?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

Find 'y', the balance in the bank account after x months

Write your equation in the form y = \_\_\_\_\_

5) Assistment #204789 "204789 - Linear Equation from Situation Bank"

A bank account currently has a balance of \$8374.

Each month, \$17 is withdrawn to pay for a monthy magazine subscription. No other transactions take place.

Assume the number of months is your independent variable (x) and the balance is your dependent variable (y).

Find 'y', the balance in the bank account after x months

Write your equation in the form y = \_\_\_\_\_.

6) Assistment #204825 "204825 - Linear Equation from Situation Freezer"

A deep freezer has a temperature of  $-5^\circ C$  when it is turned off.

The temperature then rises at 1.3°C per minute.

Assume the number of minutes is your independent variable (x) and the current temperature is your dependent variable (y)

Find 'y', the current temperature of the freezer after x minutes

Write your equation in the form y = \_\_\_\_\_.

7) Assistment #204755 "204755 - 61768 - Linear Equation from Situation Phone"

A phone company charges a connection fee of \$1.43 and a variable cost per minute of \$0.34 for a call.

Assume the number of minutes is your independent variable (x) and the cost is your dependent variable (y).

Find 'y', the cost of a phone call that lasts x minutes.

Write your equation in the form y = \_\_\_\_\_

8) Assistment #204818 "204818 - Linear Equation from Situation Freezer"

A deep freezer has a temperature of -17°C when it is turned off.

The temperature then rises at 4.1°C per minute.

Assume the number of minutes is your independent variable (x) and the current temperature is your dependent variable (y)

Find 'y', the current temperature of the freezer after x minutes

http://assistments.org/build/print/sequence/34265?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

Write your equation in the form y = \_\_\_\_\_

#### 9) Assistment #204849 "204849 - Linear Equation from Situation Submarine"

A submarine is being tracked underwater. At the beginning of the tracking the submarine is at a depth of 791 feet below sea level.

The submarine is descending at 87 feet per minute.

Assume the number of minutes is your independent variable (x) and the depth is your dependent variable (y).

Find 'y', the depth of the submarine after x minutes

Write your equation in the form y = \_\_\_\_\_.

10) Assistment #204819 "204819 - Linear Equation from Situation Freezer"

A deep freezer has a temperature of -12°C when it is turned off.

The temperature then rises at 3.8°C per minute.

Assume the number of minutes is your independent variable (x) and the current temperature is your dependent variable (y)

Find 'y', the current temperature of the freezer after x minutes

Write your equation in the form y = \_\_\_\_\_

11) Assistment #204813 "204813 - Linear Equation from Situation Freezer"

A deep freezer has a temperature of  $-24^{\circ}$ C when it is turned off.

The temperature then rises at 2.3°C per minute.

Assume the number of minutes is your independent variable (x) and the current temperature is your dependent variable (y)

Find 'y', the current temperature of the freezer after x minutes

Write your equation in the form y = \_\_\_\_\_.

12) Assistment #204801 ''204801 - 200234 - 61768 - Linear Equation from Situation Gas''

Texaco charges \$2.94 dollars per gallon of gas for refuelling vehicles.

Assume the number of gallons is your independent variable (x) and the cost is your dependent variable (y).

Find 'y', the cost of x gallons of gas.

Write your equation in the form y = \_\_\_\_\_.

#### 13) Assistment #204836 "204836 - Linear Equation from Situation Submarine"

A submarine is being tracked underwater. At the beginning of the tracking the submarine is at a depth of 141 feet below sea level.

The submarine is descending at 42 feet per minute.

Assume the number of minutes is your independent variable (x) and the depth is your dependent variable (y).

Find 'y', the depth of the submarine after x minutes

Write your equation in the form y = \_\_\_\_\_

**14)** Assistment #204781 "204781 - Linear Equation from Situation Bank" A bank account currently has a balance of \$7898.

Each month, \$9 is withdrawn to pay for a monthy magazine subscription. No other transactions take place.

Assume the number of months is your independent variable (x) and the balance is your dependent variable (y).

Find 'y', the balance in the bank account after x months

Write your equation in the form y = \_\_\_\_\_

**15**) Assistment #204806 ''204806 - 200234 - 61768 - Linear Equation from Situation Gas'' BP charges \$1.85 dollars per gallon of gas for refuelling vehicles.

Assume the number of gallons is your independent variable (x) and the cost is your dependent variable (y).

Find 'y', the cost of x gallons of gas.

Write your equation in the form y = \_\_\_\_\_.

16) Assistment #204760 ''204760 - 61768 - Linear Equation from Situation Phone''

A phone company charges a connection fee of \$1.29 and a variable cost per minute of \$0.29 for a call.

Assume the number of minutes is your independent variable (x) and the cost is your dependent variable (y).

Find 'y', the cost of a phone call that lasts x minutes.

Write your equation in the form y = \_\_\_\_\_.

17) Assistment #204835 "204835 - Linear Equation from Situation Submarine"

http://assistments.org/build/print/sequence/34265?mode=test&op\_scaf=false&op\_hint=fals... 3/29/2012

Problem Set ''Write Linear Equation from Slope and y-intercept - THE SKILL BUILDING SET'' id:         [12449]         1) Assistment #104100 ''104100 - 57702 - Algebra1 Equation from Slope and Y-intercept Mastery Learning 4''         Write a linear equation for the line with slope = 0 going through the point: (0, 1)         Write your equation in the form y =         Use x as the independent variable.			
		() Assistment #104002 ''104002 - Algebra1 Equa Write an equation in the form "y=	ation from Slope and Y-intercept Mastery Learning''' using the following information about the equation:
		Slope of the equation: 10/6	
		Y-intercept of the equation: 9	
Use x as the independent variable.			
(b) Assistment #104062 ''104062 - Algebra1 Equa Write a linear equation for the line with slope	ation from Slope and Y-intercept Mastery Learning 6'' e = 4/4 going through the point: (0, 8)		
Write your equation in the form $y=$			
Use x as the independent variable.			
) Assistment #104017 ''104017 - Algebra1 Equa	ation from Slope and Y-intercept Mastery Learning"		
Write an equation in the form "y=	" using the following information about the equation:		
Slope of the equation: $4/3$			
Y-intercept of the equation: 8			
Use x as the independent variable.			
5) Assistment #104076 ''104076 - Algebra1 Equa Write a linear equation for the line with slope	ation from Slope and Y-intercept Mastery Learning 6" e = 1/5 going through the point: (0, 2)		
Write your equation in the form y=			
Use x as the independent variable.			
) Assistment #104008 ''104008 - Algebra1 Eq Write an equation in the form "y=	<pre>juation from Slope and Y-intercept Mastery Learning'''' using the following information about the equation:</pre>		
---	--		
Slope of the equation: 4/3			
Y-intercept of the equation: 4			
Use x as the independent variable.			
) Assistment #104087 ''104087 - Algebra1 Eq Write a linear equation for the line with slo	<b>puation from Slope and Y-intercept Mastery Learning 5</b> " ope = $-7/4$ going through the point: (0, 3)		
Write your equation in the form y=			
Use x as the independent variable.			
Assistment #104103 "104103 - 57702 - Alge Write a linear equation for the line with slo Write your equation in the form y =	<b>Expra1 Equation from Slope and Y-intercept Mastery Learning 4</b> ope = 0 going through the point: $(0, 9)$		
Use x as the independent variable.			
) Assistment #104092 "104092 - Algebra1 Eq Write a linear equation for the line with slo	<b>Juation from Slope and Y-intercept Mastery Learning 5</b> " ope = -7/3 going through the point: (0, 9)		
Write your equation in the form y=			
Use x as the independent variable.			
0) Assistment #104057 ''104057 - 56786 - Alg Write an equation in the form "y=	gebra1 Equation from Slope and Y-intercept Mastery Learning 3		
Slope of the equation: 0			
Y-intercept of the equation: 3			
Use x as the independent variable.			

Write your equation in the form y= Use x as the independent variable. 12) Assistment #104006 ''104006 - Algebra1 Equation from Slope and Y-intercept Mastery Learning''
Use x as the independent variable.  12) Assistment #104006 ''104006 - Algebra1 Equation from Slope and Y-intercept Mastery Learning''
12) Assistment #104006 ''104006 - Algebra1 Equation from Slope and Y-intercept Mastery Learning''
12) Assistment #104006 "104006 - Algebra1 Equation from Slope and Y-intercept Mastery Learning"
Write an equation in the form "y=" using the following information about the equation:
Slope of the equation: 10/1
Y-intercept of the equation: 9
Use x as the independent variable.
13) Assistment #103995 ''103995 - Algebra1 Equation from Slope and Y-intercept Mastery Learning'' Write an equation in the form "y=" using the following information about the equation:
Slope of the equation: 5/5
Y-intercept of the equation: 2
Use x as the independent variable.
<b>14)</b> Assistment #104069 "104069 - Algebra1 Equation from Slope and Y-intercept Mastery Learning 6" Write a linear equation for the line with slope = $2/5$ going through the point: (0, 5)
Write your equation in the form y=
Use x as the independent variable.
<b>15</b> ) Assistment #104073 "104073 - Algebra1 Equation from Slope and Y-intercept Mastery Learning 6" Write a linear equation for the line with slope = $2/1$ going through the point: (0, 8)
Write your equation in the form y=
Use x as the independent variable.

<b>(6) Assistment #104077 ''104077 - Algebra1 Equ</b> Write a linear equation for the line with slope	uation from Slope and Y-intercept Mastery Learning 6'' e = 8/3 going through the point: (0, 4)
Write your equation in the form y=	
Use x as the independent variable.	
7) Assistment #104016 ''104016 - Algebra1 Equ Write an equation in the form "y=	uation from Slope and Y-intercept Mastery Learning'' " using the following information about the equation:
Slope of the equation: 7/6	
Y-intercept of the equation: 4	
Use x as the independent variable.	
8) Assistment #104054 ''104054 - 56786 - Algeb Write an equation in the form "y=	<b>Tral Equation from Slope and Y-intercept Mastery Learning 3'</b> " using the following information about the equation:
Slope of the equation: 0	
Y-intercept of the equation: 9	
Use x as the independent variable.	
9) Assistment #104042 ''104042 - 56786 - Algeb Write an equation in the form "y=	<b>Dra1 Equation from Slope and Y-intercept Mastery Learning 3</b> " " using the following information about the equation:
Slope of the equation: 0	
Y-intercept of the equation: 7	
Use x as the independent variable.	
20) Assistment #104070 ''104070 - Algebra1 Equ Write a linear equation for the line with slope	uation from Slope and Y-intercept Mastery Learning 6'' e = 3/5 going through the point: (0, 2)
Write your equation in the form y=	
Use x as the independent variable.	

## Problem Set "Recognize Linear Pattern - THE SKILL BUILDING SET" id:[8752]

 Assistment #64267 ''64267 - 57852 - Recognizing Linear Functions'' Choose the answer that describes the two graphs shown below:
 A) B)



- O Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

# 2) Assistment #64214 "64214 - 57849 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below: A) B)



- O Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

#### 3) Assistment #64243 "64243 - 57752 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below: A) B)



- OBoth are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

## 4) Assistment #64233 ''64233 - 57850 - Recognizing Linear Functions''

B)

Choose the answer that describes the two graphs shown below:

**A**)



- Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

#### 5) Assistment #64198 "64198 - 57849 - Recognizing Linear Functions"

**B**)

Choose the answer that describes the two graphs shown below:

A)



- Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

## 6) Assistment #64217 "64217 - 57850 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below: A) B)



- OBoth are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

# 7) Assistment #64256 ''64256 - 57752 - Recognizing Linear Functions''

Choose the answer that describes the two graphs shown below:  $\mathbf{A}$ 

A)



- O Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

## 8) Assistment #64254 "64254 - 57752 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below: B)

A)



- Both are Linear
- Neither are Linear
- A is Linear but B is not
- B is Linear but A is not

9) Assistment #64207 "64207 - 57849 - Recognizing Linear Functions"

Choose the answer that describes the two graphs shown below: B)

A)

l) Assistment #73980 "73 Determine the v-interce	980 - 61826 - Algebra1 Finding Y-intercept from Linear Equation 2"
y = (8/7)x - 6	pt from the following equation.
2) Assistment #74003 ''74 Determine the y-interce y = (7/5)x	<b>003 - 61827 - Algebra1 Finding Y-intercept from Linear Equation 3</b> " opt from the following equation:
3) Assistment #74017 "74 Determine the y-interce 4y = 9x + 5	<b>017 - 61828 - Algebra1 Finding Y-intercept from Linear Equation 4</b> " pt from the following equation:
4) Assistment #73999 ''73 Determine the y-interce y = (5/7)x	<b>1999 - 61827 - Algebra1 Finding Y-intercept from Linear Equation 3''</b> opt from the following equation:
5) Assistment #73950 "73 Determine the y-interce y = (4/9)x + 4	<b>950 - Algebra1 Finding Y-intercept from Linear Equation''</b> opt from the following equation:
5) Assistment #73947 ''73	947 - Algebra1 Finding Y-intercept from Linear Equation''
Determine the y-interce $y = (1/9)x + 10$	pt from the following equation:
7) Assistment #73994 "73 Determine the y-interce y = (7/5)x	<b>3994 - 61827 - Algebra1 Finding Y-intercept from Linear Equation 3</b> " opt from the following equation:

Determine the y-intercept from the following equation: 1y = 8x + 3

9) Assistment #73972 "73972 - 61826 - Algebra1 Finding Y-intercept from Linear Equation 2" Determine the y-intercept from the following equation: y = (1/9)x - 7

10) Assistment #74032 ''74032 - 61830 - Algebra1 Finding Y-intercept from Linear Equation 6'' Determine the y-intercept from the following equation:
9y = 9x

11) Assistment #73949 "73949 - Algebra1 Finding Y-intercept from Linear Equation" Determine the y-intercept from the following equation: y = (10/7)x + 6

**12**) Assistment #73988 ''73988 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8'' Determine the y-intercept from the following equation: 10y - 8x= 5

13) Assistment #73968 "73968 - 61826 - Algebra1 Finding Y-intercept from Linear Equation 2" Determine the y-intercept from the following equation: y = (10/10)x - 4

14) Assistment #73952 "73952 - Algebra1 Finding Y-intercept from Linear Equation" Determine the y-intercept from the following equation: y = (4/2)x + 4

15) Assistment #74011 ''74011 - 61828 - Algebra1 Finding Y-intercept from Linear Equation 4'' Determine the y-intercept from the following equation: 9y = 6x + 10

<b>17) Assistment #73983 ''739</b> Determine the y-intercept 1y - 1x= 2	<b>183 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</b> from the following equation:	
18) Assistment #73962 ''739 Determine the v-intercent	062 - 61831 - Algebra1 Finding Y-intercept from Linear Equation 7''	
1x + 2y = 3	from the following equation.	
20) Assistment #73080 ''730	189 - 61832 - Algebra 1 Finding V intercent from Linear Equation 8"	
<b>20) Assistment #73989 ''739</b> Determine the y-intercept 6y - 6x= 4	<b>289 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</b> from the following equation:	
20) Assistment #73989 ''739 Determine the y-intercept 6y - 6x= 4	<b>289 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</b> from the following equation:	
20) Assistment #73989 ''739 Determine the y-intercept 6y - 6x = 4 21) Assistment #73955 ''739 Determine the y-intercept y = (1/1)x + 10	<ul> <li><b>289 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</b></li> <li>a from the following equation:</li> <li><b>255 - Algebra1 Finding Y-intercept from Linear Equation''</b></li> <li>b from the following equation:</li> </ul>	
<ul> <li>20) Assistment #73989 ''739</li> <li>Determine the y-intercept 6y - 6x= 4</li> <li>21) Assistment #73955 ''739</li> <li>Determine the y-intercept y = (1/1)x + 10</li> </ul>	<ul> <li><b>289 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</b></li> <li>a from the following equation:</li> <li><b>255 - Algebra1 Finding Y-intercept from Linear Equation''</b></li> <li>a from the following equation:</li> </ul>	
20) Assistment #73989 ''739 Determine the y-intercept 6y - 6x = 4 21) Assistment #73955 ''739 Determine the y-intercept y = (1/1)x + 10 22) Assistment #73948 ''739 Determine the y-intercept y = (8/3)x + 8	<ul> <li>289 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8" from the following equation:</li> <li>2755 - Algebra1 Finding Y-intercept from Linear Equation" from the following equation:</li> <li>2748 - Algebra1 Finding Y-intercept from Linear Equation" from the following equation:</li> </ul>	

24) Assistment #74037 ''740 Determine the y-intercept 9y = 1x	<b>037 - 61830 - Algebra1 Finding Y-intercept from Linear Equation 6</b> " t from the following equation:
5) Assistment #73957 "739 Determine the y-intercept 8x + 10y = 6	<b>957 - 61831 - Algebra1 Finding Y-intercept from Linear Equation 7</b> " t from the following equation:
<b>26)</b> Assistment #74019 ''740 Determine the y-intercept -10y = 8x + 3	<b>019 - 61829 - Algebra1 Finding Y-intercept from Linear Equation 5</b> " t from the following equation:
27) Assistment #73945 "'739 Determine the y-intercept y = (9/2)x + 9	<b>945 - Algebra1 Finding Y-intercept from Linear Equation''</b> t from the following equation:
<ul> <li>27) Assistment #73945 ''739</li> <li>Determine the y-intercept y = (9/2)x + 9</li> <li>28) Assistment #73984 ''739</li> <li>Determine the y-intercept 3y - 10x = 1</li> </ul>	<ul> <li>945 - Algebra1 Finding Y-intercept from Linear Equation''</li> <li>a from the following equation:</li> <li>984 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8''</li> <li>a from the following equation:</li> </ul>
27) Assistment #73945 "'739 Determine the y-intercept y = (9/2)x + 9 28) Assistment #73984 "'739 Determine the y-intercept 3y - 10x = 1 29) Assistment #74026 "'740 Determine the y-intercept -9y = 10x + 9	<ul> <li>945 - Algebra1 Finding Y-intercept from Linear Equation'' t from the following equation:</li> <li>984 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8'' t from the following equation:</li> <li>926 - 61829 - Algebra1 Finding Y-intercept from Linear Equation 5'' t from the following equation:</li> </ul>
27) Assistment #73945 "'739 Determine the y-intercept y = (9/2)x + 9 28) Assistment #73984 "'739 Determine the y-intercept 3y - 10x = 1 29) Assistment #74026 "'740 Determine the y-intercept -9y = 10x + 9 30) Assistment #74036 "'740 Determine the y-intercept 1y = 6x	<ul> <li>245 - Algebra1 Finding Y-intercept from Linear Equation'' t from the following equation:</li> <li>284 - 61832 - Algebra1 Finding Y-intercept from Linear Equation 8'' t from the following equation:</li> <li>226 - 61829 - Algebra1 Finding Y-intercept from Linear Equation 5'' t from the following equation:</li> <li>236 - 61830 - Algebra1 Finding Y-intercept from Linear Equation 6'' t from the following equation:</li> </ul>

# Problem Set "Division Fractions - THE SKILL BUILDING SET" id:[14211]

 $\begin{array}{ccc}
18 & 7 \\
-- & \div & -- ?
\end{array}$ 

22

1) Assistment #112358 ''112358 - 106622 - Dividing Fractions Template'' 18 7

22

What is the quotient of
-------------------------

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

2) Assistment #112352 ''112352 - 29863 - Dividing Fracitons''

What is the quotient of  $\frac{7}{4} \div \frac{7}{7}$ ?

3) Assistment #112305 ''112305 - Dividing Fractions Template''

	3	1
What is the quotient of	$3 - \div 2$	?
	7	3

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3



4) Assistment #112324 ''112324 - 46275 - Dividing Fractions with Mixed Numbers Template''

What is the quotient of  $4 \frac{1}{2} \div \frac{5}{7}$ ?

You MUST reduce your answer to lowest terms.

If your answer is a mixed number, be sure to put a space between the whole number and the fraction in your answer. The answer should look like this:  $6 \frac{2}{3}$ . Not like this: 62/3

5) Assistment #112277 "112277 - Dividing Fractions Template"

	9	10
What is the quotient of	— <u>÷</u>	2?
	3	10

## Problem Set "Mean - LEVEL 1 SKILL BUILDING" id:[17470]

1) Assistment #126435 ''126435 - 57305 - Mean of Integer and Decimals,6'' Calculate the mean of the following numbers:

1.03, 2, 2, 0.97, 2, 2.34

(round to the nearest hundredths place)

2) Assistment #126508 ''126508 - 56648 - Mean with Context and Vertical Table''

Matt runs a shoe store, and listed below are the store sales for the year 1997. What were the average monthly sales in 1997?

Month	Sales (\$)
January	1006
February	1044
March	2504
April	1119
May	1503
June	601
July	1003
August	2203
September	1011
October	1634
November	1921
December	2050

(round to hundredths place)

3) Assistment #126464 ''126464 - Mean''

Calculate the **mean** of the following numbers:

17, 13, 6, 10, 18, 15

(round to the nearest tenths place)

4) Assistment #126467 "126467 - 57312 - Mean with Context, 5"

Jamie works at the local clothes store and has to process all the sales at the end of the day. The list below gives the dollar amounts of all the sales made on a particular day.

What is the average amount of these sales?

29, 18, 8, 13.86, 4

(round to the nearest hundredths place)

5) Assistment #126428 ''126428 - 125362 - Mean with Context and Table 2''

The coach for the All-USA Math Team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 10 tests.

Name of player	Number of points scored
Chris	8,11,14,13,18,23,12,3,30,14
Liz	20,22,6,13,7,2,17,27,19,13

What is the mean (average) number of points obtained by Liz ?

6) Assistment #126420 "126420 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	9,5,17,14,23,15,6,4,28,6
Amanda	23,20,5,16,7,8,22,29,14,10

What is the mean (average)number of points scored by Daniel ?

7) Assistment #126450 "126450 - Mean - Smaller Numbers"

Calculate the **mean** of the following numbers:

9, 10, 2, 4, 8, 9

(round to the nearest hundredths place)

#### 8) Assistment #126417 "126417 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Eric	9,5,16,20,19,23,10,6,24,7
Alexa	17,26,6,13,10,9,15,30,20,15

What is the mean (average)number of points scored by Eric ?

9) Assistment #126496 "126496 - 56554 - Mean of Integer and Decimals" Calculate the mean of the following numbers:

1.35, 3, 8, 1.09, 6, 2.63, 5

(round to the nearest hundredths place)

## 10) Assistment #126516 ''126516 - 125360 - Mean with Context and Table 1, 8''

The coach for the Drama Team Competition needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 8 games.

Name of player	Number of points scored	
Eric	10,6,9,12,26,21,13,6	
Alexa	23,22,2,16,12,7,19,28	

What is the **mean** (average) number of points scored by Eric ? (Round to the hundredths place)

11) Assistment #126509 ''126509 - 125327 - Mean with Context, 11''

During a medical study, doctors recorded the weights in pounds of all their volunteers. Some of the weights are given here. What is the average weight of the volunteers listed below? 147, 160, 103, 137, 127, 151, 118, 149, 151, 109, 135

(round to the nearest hundredths place)

#### 12) Assistment #126483 ''126483 - 56565 - Mean with Context''

Nancy obtained the following scores in 5 math tests. Calculate the mean of Nancy's math scores:

189, 126, 88, 124, 47

(round to the nearest hundredths place)

**13**) Assistment #126413 "126413 - 57304 - Mean of Integer and Decimals,9" Calculate the mean of the following numbers:

1.67, 1, 9, 1.56, 5, 3.14, 14, 3.65, 10

(round to the nearest hundredths place)

**14**) Assistment #126424 ''126424 - 56562 - Mean of Integers'' Calculate the mean of the following numbers:

38, 111, 54, 53, 69

(round to the nearest hundredths place)

15) Assistment #126418 "126418 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Ricky	13,6,15,19,24,21,12,6,30,13
Carol	19,22,5,16,12,9,22,27,15,15

What is the mean (average)number of points scored by Ricky ?

16) Assistment #126491 ''126491 - 125271 - Mean of Decimals,11''

Calculate the **mean** of the following numbers:

#### Problem Set "Median - THE SKILL BUILDING SET" id:[21943]

1) Assistment #137385 ''137385 - Median - Find Missing Data Points - Even'' What number should be added to the list below to get a median of 18?

10, 21, 9, 15, 28

11301

0 10

#### 2) Assistment #137491 ''137491 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games
John	40,67,27,80,16,75,57,4,72,24,48
Cristina	22,26,8,11,54,6,9,22,23,18,11

What is the median number of points scored by John?

3) Assistment #137387 "137387 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19?

13, 23, 8, 15, 26

9 🔘

0 14

0 30

04

#### 4) Assistment #137359 "137359 - 56718 - Median with Context and Table and Even values"

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	11,8,14,6,1,20,22,12
Cristina	20,8,27,6,24,22,12,15

What is the median of number of points obtained by Cristina?

5) Assistment #137313 "137313 - 132165 - Median - Find Missing Data Points - Even, 8" What number should be added to the list below to get a **median** of 25.115?

12, 28.23, 35, 19, 61, 8.63, 48

1322

9.63

5.63

#### 6) Assistment #137483 "137483 - 56714 - Median - Find Missing Data Points - Odd, with context"

Mary obtained the following scores in 4 of 5 math tests. If the **median** of Mary's math scores was 21, what was Mary's math score on the fifth test?

14, 26.87, 21, 6 7 15 24 3

#### 7) Assistment #137488 ''137488 - 56714 - Median - Find Missing Data Points - Odd, with context''

John obtained the following scores in 4 of 5 math tests. If the **median** of John's math scores was 17, what was John's math score on the fifth test?

	12,	26.87,	17,	7
8				
13				
26				
<b>0</b> 4				

## 8) Assistment #137357 ''137357 - 56718 - Median with Context and Table and Even values''

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	6,8,9,9,8,21,26,20

Cristina 18,8,27,4,24,22,12,15

What is the median of number of points obtained by Cristina ?

9) Assistment #137379 "137379 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[1.33, 3.85, 1.65, 2.11, 1.12, 4.51, 2.33, 2.69, 3.91]

What is the **median** number in this list?

**10**) Assistment #137402 ''137402 - Median - Find Missing Data Points - Odd'' What number should be added to the list below to get a **median** of 18?

- 11, 23, 5, 18
- 25
  17
  6

02

# 11) Assistment #137386 "137386 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19.5?

- 14, 22, 9, 17, 25
- 0 10

15

0 33

6 4

12) Assistment #137466 ''137466 - 56719 - Median with Context and Vertical Table''

Liz runs a grocery store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1125	
February	2506	
March	1922	
April	607	
May	1044	
June	901	

July	1507
August	1631
September	1006
October	1021
November	2203
December	2054

## 13) Assistment #137472 "137472 - 56719 - Median with Context and Vertical Table"

Ashley runs a shoe store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)	
January	1126	
February	2504	
March	1924	
April	601	
May	1045	
June	903	
July	1501	
August	1636	
September	1002	
October	1024	
November	2201	
December	2050	

# 14) Assistment #137336 "137336 - 56717 - Median with Context and Table and Odd values"

The coach for the School Tennis Team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 7 games.

Name of player	Number of points scored on the last ten games		
Brian	20,8,15,5,23,22,13		
Camille	12,10,12,7,9,23,24		

## What is the **median** of number of points scored by Brian ?

http://assistments.org/build/print/sequence/21943?mode=test&op\_scaf=false&op\_hint=fals... 3/28/2012

#### Problem Set "Elapsed Time - LEVEL 2 SKILL BUILDING" id:[37824]

#### 1) Assistment #234450 ''234450 - Elapsed Time 3''

When Mary last checked the clock it was 6:51 pm. It is now 10:25 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

2) Assistment #234432 ''234432 - Elapsed Time 2''

When Mary last checked the clock it was 1:47 pm. It is now 3:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 3) Assistment #234394 "234394 - 215936 - Elapsed Time 1"

When Mark last checked his watch it was 1:00 pm. It is now 4:15 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

# 4) Assistment #234460 ''234460 - Elapsed Time 4''

When Travis last checked the clock it was 6:12 pm. It is now 10:42 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 5) Assistment #234391 "234391 - 215936 - Elapsed Time 1"

When Eddie last checked his watch it was 6:00 pm. It is now 8:53 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

6) Assistment #234483 ''234483 - Elapsed Time 4''

When Dan last checked the clock it was 1:14 pm. It is now 4:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

7) Assistment #234419 "234419 - Elapsed Time 2" When Rachel last checked the clock it was 2:20 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

8) Assistment #234407 "234407 - Elapsed Time 2" When Cindy last checked the clock it was 3:47 pm. It is now 6:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

9) Assistment #234388 "234388 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 1:00 pm. It is now 3:29 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**10)** Assistment #234475 "234475 - Elapsed Time 4" When Matt last checked the clock it was 5:17 pm. It is now 9:39 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**11) Assistment #234446 ''234446 - Elapsed Time 3''** When Anna last checked the clock it was 2:56 pm. It is now 6:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**12**) Assistment #234458 "234458 - Elapsed Time 3" When Beth last checked the clock it was 1:34 pm. It is now 5:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**13**) Assistment #234380 "234380 - 215936 - Elapsed Time 1" When Tony last checked his watch it was 5:00 pm. It is now 7:32 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

14) Assistment #234437 "234437 - Elapsed Time 3"

When Sarah last checked the clock it was 4:36 pm. It is now 8:10 pm. How much time has elapsed?

Answer: \_\_:\_\_ (hours:minutes)

15) Assistment #234436 ''234436 - Elapsed Time 3''

When Danielle last checked the clock it was 7:38 pm. It is now 10:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

## 16) Assistment #234471 ''234471 - Elapsed Time 4''

When Andrew last checked the clock it was 5:19 pm. It is now 8:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

17) Assistment #234384 "234384 - 215936 - Elapsed Time 1"

When Jeff last checked his watch it was 1:00 pm. It is now 3:20 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**18)** Assistment #234381 "234381 - 215936 - Elapsed Time 1" When Matt last checked his watch it was 7:00 pm. It is now 9:21 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

\_\_\_\_\_

**19) Assistment #234406 ''234406 - Elapsed Time 2''** When Cindy last checked the clock it was 2:31 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

20) Assistment #234386 "234386 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 7:00 pm. It is now 9:33 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**21)** Assistment #234456 ''234456 - Elapsed Time 3'' When Lindsay last checked the clock it was 7:45 pm. It is now 11:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

22) Assistment #234434 "234434 - Elapsed Time 3" When Kate last checked the clock it was 7:44 pm. It is now 11:13 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

## Problem Set "Counting Methods - THE SKILL BUILDING SET" id:[15528]

#### 1) Assistment #120292 ''120292 - Calvin is making ...''

Calvin is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make without sausage?

Pizza Pi's Pizzeria		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Ori <mark>gina</mark> l

## 2) Assistment #119978 ''119978 - Jenny is ordering...''

Jenny is ordering a salad from the menu shown below. If she picks one item from each category, how many different salads can she make with peppers?

Gar	den ens ore	
Lettuce	Vegetable	Dressing
Iceberg	Tomatoes	Vinaigrette
Romaine	Carrots	Ranch
Bibb	Peppers	Caesar
	Onions	

## 3) Assistment #120307 ''120307 - Kaitlin is gettin...''

Kaitlin is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make without a large popcorn?

	Golden Reel Cinema	8
Popcorn	Snacks	Soda
Kiddie Medium Large Jumbo	Candy Bar Pretzel Hot Dog Ice Cream	Orange Soda Root Beer Ginger Ale

# 4) Assistment #120029 ''120029 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with peppers?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 5) Assistment #119962 "119962 - How many ways can..."

How many ways can the vases shown below be organized on the shelf if the red vase does not move?



# 6) Assistment #120023 ''120023 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with tomatoes?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

# 7) Assistment #119947 "119947 - Penny is going to..."

Penny is going to flip a coin 4 times. How many outcomes are there in which she gets tails a total of 3 times?

# 8) Assistment #119951 "119951 - Kenny is going to..."

Kenny is going to flip a coin 4 times. How many outcomes are there in which he gets heads a total of 0 times?

# 9) Assistment #120000 ''120000 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with ham?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 10) Assistment #119917 "119917 - Blair is making a..."

Blair is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make without pepperoni?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 11) Assistment #120022 "120022 - Patty is making a..."

Patty is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make with mushrooms?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 12) Assistment #120407 ''120407 - Nancy is getting ...''

Nancy is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make with an ice cream?

Problem Set "Properties and Classification of Polygons With 5 Or More Sides - THE SKILL BUILDING SET"  ${\rm id}{\rm :}[24173]$ 

1) Assistment #144038 "144038 - 134809 - What is a Polygon? Check all that apply. (1correctpolygon)" Please select all of the shapes that are polygons.



2) Assistment #144017 "144017 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)" Please select all of the shapes that are polygons.





**3**) Assistment #143994 "143994 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)" Please select all of the shapes that are polygons.



# Assistment - Printing Content



**4)** Assistment #144106 "144106 - 143395 Convex/Concave Polygon (True or False)" Is the following statement true or false? This polygon is a "concave polygon".

False

True

5) Assistment #144006 ''144006 - 143426 - What is a Polygon? Check all that apply. (2correctpolygons)'' Please select all of the shapes that are polygons.



## Problem Set "Range - THE SKILL BUILDING SET" id:[8979]

## 1) Assistment #58435 ''58435 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 121?

52, 67, 27, 73, 24, 107, 84

85202

0 145

0 158

2) Assistment #58437 ''58437 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 129?

41, 55, 39, 67, 5, 101, 78 79 191 134 161

**3**) Assistment #58386 ''58386 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.67, 54.67, 32, 106, 6, 35, 143

# 4) Assistment #58442 ''58442 - 30370 - range-table-female''

The coach for the lacross Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Shaun	10, 6, 17, 14, 25, 18, 8, 4, 23, 10
Julia	16, 19, 6, 9, 9, 2, 15, 30, 13, 11

What is the **range** number of points scored by Julia?

5) Assistment Rachel's sco	<b>#58475 ''58475 - 57508 - Range, with Context, 8''</b> res in 8 math tests are shown below. What is the range of Rachel's scores?
	26, 31, 23, 29, 16, 24, 40, 48
6) Assistment	#58251 ''58251 - Range''
Calculate the	e range of the following numbers:
	52, 43, 3, 124, 78, 137
	52, 34, 9, 106, 84, 139, 106
8) Assistment What numbe	<b>#58420 ''58420 - 57507 - Range, Missing number, 10''</b> or should be added to the following list to get a range of 122?
	50, 53, 65, 38, 88, 120, 99, 131, 146
19	
23	
24	
) 31	

# 9) Assistment #58443 ''58443 - 30370 - range-table-female''

The coach for the ping-pong Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	16, 10, 19, 17, 20, 18, 13, 3, 26, 8
Amanda	18, 22, 5, 10, 12, 2, 21, 30, 16, 16

# What is the **range** number of points scored by Amanda?



#### 10) Assistment #58466 ''58466 - 57511 - Range, with Context, 6''

The All-USA Physics team coach needs to pick one of two people for the All-USA Physics team. Points obtained by Gary and Ross are given below.

What is the range of points obtained by Ross?

Gary	15, 8, 18, 18, 16, 18
Ross	25, 20, 14, 23, 15, 29

**11)** Assistment #58378 ''58378 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.33, 31.67, 27, 114, 4, 31, 133

12) Assistment #58488 ''58488 - 57509 - Range, with Context, 5'' Beth's scores in 5 history tests are shown below. What is the range of Beth's scores?

33, 20, 16, 52, 25

13) Assistment #58247 "58247 - Range"

Calculate the **range** of the following numbers:

54, 47, 12, 106, 91, 127

14) Assistment #58474 ''58474 - 57508 - Range, with Context, 8'' Beth's scores in 8 math tests are shown below. What is the range of Beth's scores?

27, 32, 24, 26, 11, 30, 37, 48



## 15) Assistment #58458 ''58458 - 57510 - Range, with Context, 7''

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Ross are given below.

What is the range of points obtained by Joe?

Joe	23, 28, 20, 12, 21, 19, 31
Ross	15, 9, 15, 19, 26, 16, 22

**16**) Assistment #58369 ''58369 - 27424 - Find the Range'' Calculate the **range** of the following numbers:

54, 30, 14, 112, 93, 147, 112

17) Assistment #58250 ''58250 - Range''

Calculate the **range** of the following numbers:

67, 37, 17, 118, 86, 137

## 18) Assistment #58399 "58399 - What number shoul..."

What number should be added to the following list to get a range of 128?

69, 46, 8, 124, 97

123137

0 136

0 151

#### 19) Assistment #58403 "58403 - What number shoul..."

What number should be added to the following list to get a range of 113?

59, 34, 15, 119, 77

0 118

0 129

- 128
- 0 140
# Problem Set "Properties and Classification Quadrilaterals - THE SKILL BUILDING SET" id:[23755]

# 1) Assistment #143305 "143305 - Which of the foll..."

Which of the following figures are trapezoids? (Check all that apply)



2) Assistment #143325 "143325 - Given that the fo..."

Given that the following quadrilateral ABCD is a rhombus:



Which angle of the rhombus is congruent to angle A

BC

🔘 D

A

# 3) Assistment #143323 $^{\prime\prime}$ 143323 - Given that the fo...''

Given that the following quadrilateral ABCD is a rhombus:



Which angle of the rhombus is congruent to angle B

- CD
- A
- ) B

4) Assistment #143266 "143266 - Given that the fo..." Given that the following quadrilateral ABCD is a rhombus:



Which side of the rhombus is parallel to side BC?

- O BC
- O CD
- O AD
- AB

# 5) Assistment #143233 "143233 - Given that the fo..."

Given that the following quadrilateral ABCD is a parallelogram:



- O AD
- O AB
- 🔘 BC
- CD

6) Assistment #143238 "143238 - Given that the fo..."

Given that the following quadrilateral ABCD is a parallelogram:



Which angle of the parallelogram is congruent to angle D

on angle A

o angle B

on angle C

angle D

7) Assistment #143254 "143254 - If the following ..."

If the following shape is a parallelogram:



If the length of the diagonal between points A and C is 6 units, what is the length of line segment AE?

8) Assistment #143287 "143287 - Given that the fo..." Given that the following quadrilateral ABCD is a rectangle:

# Problem Set "Circumference - THE SKILL BUILDING SET" id:[10767]

1) Assistment #92320 "92320 - 75487 - 75486 - 74181- circumference from diameter of circle" What is the circumference of the circle with the diameter of 5? (use 3.14 for  $\square$ )

5

2) Assistment #92329 ''92329 - 74195 - 55956 - Diameter from circumference of circle''

What is the diameter of the circle when the circumference of the circle is 18.84? (use 3.14 for  $\prod$ )



3) Assistment #92335 ''92335 - 74181 - 62271 - circumference of the circle using radius'' What is the circumference of the circle with the radius of 4? (use 3.14 for  $\prod$ )

<sup>4</sup> 

8



5) Assistment #92404 ''92404 - 74546 - Radius from circumference of circle'' What is the radius of the circle when the circumference of the circle is 25.12? (use 3.14 for  $\prod$ )



6) Assistment #92324 ''92324 - 74195 - 55956 - Diameter from circumference of circle''

What is the diameter of the circle when the circumference of the circle is 25.12? (use 3.14 for  $\prod$ )



7) Assistment #92369 "92369 - 75491 - 75486 - 74181- diameter from circumference of circle" What is the diameter of the circle when the circumference of the circle is 25.12? (use 3.14 for  $\prod$ )



8) Assistment #92365 ''92365 - 62273 - 55937 - Circumference of circle using diameter'' What is the circumference of the circle with the diameter of 8? (use 3.14 for  $\prod$ )

9

9) Assistment #92363 ''92363 - 62273 - 55937 - Circumference of circle using diameter''
What is the circumference of the circle with the diameter of 9? (use 3.14 for $\prod$ )

**10**) Assistment #92338 "92338 - 74181 - 62271 - circumference of the circle using radius" What is the circumference of the circle with the radius of 2? (use 3.14 for  $\prod$ )

2

11) Assistment #92350 ''92350 - 74181 - 62271 - circumference of the circle using radius'' What is the circumference of the circle with the radius of 6? (use 3.14 for  $\prod$ )

6

# Problem Set " Area Circle - THE SKILL BUILDING SET" id:[10762]

# 1) Assistment #91925 ''91925 - 55956 - Diameter from area of circle''

What is the diameter of the circle when the area of the circle is 78.5? (use 3.14 for  $\prod$ )



image not to scale

# 2) Assistment #91928 ''91928 - 55956 - Diameter from area of circle''

What is the diameter of the circle when the area of the circle is 50.24? (use 3.14 for  $\prod$ )



image not to scale

3) Assistment #91908 "91908 - Radius from area of circle"

What is the radius of the circle when the area of the circle is 12.56? (use 3.14 for  $\prod$ )



image not to scale

# 4) Assistment #91853 ''91853 - 55956 - Diameter from area of circle''

What is the diameter of the circle when the area of the circle is 50.24? (use 3.14 for  $\prod$ )



image not to scale

# 5) Assistment #91859 "91859 - Radius from area of circle"

What is the radius of the circle when the area of the circle is 113.04? (use 3.14 for  $\prod$ )



## 6) Assistment #91909 ''91909 - Radius from area of circle''

What is the radius of the circle when the area of the circle is 28.26? (use 3.14 for  $\prod$ )



image not to scale

7) Assistment #91878 ''91878 - 55937 - Area of circle using diameter'' What is the area of the circle with the diameter of 8? (use 3.14 for  $\prod$ )

image not to scale

8

8) Assistment #91880 "91880 - 55937 - Area of circle using diameter" What is the area of the circle with the diameter of 6? (use 3.14 for  $\prod$ )

6

image not to scale

9) Assistment #91883 "91883 - 62273 - 55937 - Area of circle using diameter" What is the area of the circle with the diameter of 8? (use 3.14 for  $\prod$ )

8

image not to scale

**10**) Assistment #91877 ''91877 - 55937 - Area of circle using diameter'' What is the area of the circle with the diameter of 10? (use 3.14 for  $\prod$ )

10

image not to scale

11) Assistment #91854 ''91854 - 55956 - Diameter from area of circle''

ASSISTMENTS.ORG

# **Comparing and Scaling**

# Appendix of Student Work

Cristina Heffernan, Alexandra Birch, Quinten Palmer, and Jeffrey Namias Academic Year 2011 – 2012

This is a document of the Pretest, Posttest, Mid test, and all of the pre-requisite and off-topic skill builders used in the CMP Study. Academic Year 2011 – 2012.

#### Problem Set "Pretest of Comparing and Scaling from WPI" id:[37693]

#### 1) Assistment #182537 "182537 - 1. The ratio of t..."

1. The ratio of tulips to lilies in a flower arrangement is 2 to 17. Find an equivalent ratio.

- D. 3 to 18
- O C. 34 to 4
- A. 17 to 2
- B. 1 to 8.5

#### 2) Assistment #182538 ''182538 - 2. Jessica is sel...''

2. Jessica is selling tickets to the school musical. She sells 6 student tickets, 9 adult tickets, and 8 senior tickets. Write the ratio of adult tickets to student tickets in 3 ways.

- D. 8:6; 8 to 6; 8/6
- C. 9:8; 9 to 8; 9/8
- A. 9:6; 9 to 6; 9/6
- B. 6:9; 6 to 9: 6/9

#### 3) Assistment #182539 "182539 - 3. The ratio of f..."

3. The ratio of fruit to ice in a fruit smoothie is 7 to 4. What percent of the total smoothie is fruit?

- B. 57%
- A. 175%
- C. 36%
- D. 64%

#### 4) Assistment #182540 ''182540 - 4. A dessert reci...''

4. A dessert recipe calls for 3 cups sugar and 4 cups cocoa powder. If you are following the recipe but using 12 cups of cocoa powder, how much sugar do you need?

- B. 16 cups
- D. 6 cups
- C. 9 cups
- A. 12 cups

#### 5) Assistment #182541 "182541 - 5. Mix A uses 2 s..."

5. Mix A uses 2 scoops powder and 5 ounces water. Mix B uses 16 scoops powder and 22 ounces water. Which 2 ratios would you want to compare to determine which mix is strongest?

- B. 5/2 vs. 22/16
- O C. 5/7 vs. 22/38
- A. 2/5 vs. 16/22
- D. 2/7 vs. 16/38

6) Assistment #182542 ''182542 - 6. A car travels ...''

6. A car travels 200 miles using 7 gallons of gas. At that rate, how far can the car travel using 35 gallons of gas?

A. 1,000 miles

- C. 900 miles
- D. 1,500 miles
- B. 1,200 miles

# 7) Assistment #182543 ''182543 - 7. You can buy 8 ...''

7. You can buy 8 cupcakes for \$4.64. What is the unit price?

- D. \$1.25
- A. \$0.60
- C. \$0.58
- O B. \$1.72

8) Assistment #182544 ''182544 - 8. Find the value...''

$$\frac{7}{3} = \frac{?}{27}$$

O D. 70

🔘 B. 63

O A. 84

🔘 C. 49

9) Assistment #182545 ''182545 - 9. Find the value...''

$$\frac{6}{16} = \frac{9}{?}$$

O D. 36

🔘 A. 24

O C. 42

🔘 B. 30

#### 10) Assistment #182546 "182546 - 10. The ratio of ..."

10. The ratio of dogs to cats is 3 to 5. There are 15 dogs. How many cats are there?

🔘 D. 12

O C. 25

🔘 A. 9

🔘 B. 30

#### 11) Assistment #182547 "182547 - Use the following..."

Use the following table to answer questions 11 & 12. Show all work on separate sheet of paper.

11. What percent of the homeruns (listed in the table) did Alex Rodriguez hit?

Number of Homeruns
54
50
47
46
35
33
30
295

Homerun Statistics for the 2007-2008 Baseball Season

#### 12) Assistment #182548 ''182548 - 12. Using the inf...''

12. Using the information in the table:

a) Write a comparison statement using ratios

Homerun Statistics for the 2007-2008 Baseball Season

Player	Number of Homeruns
Alex Rodriguez	54
Prince Fielder	50
Ryan Howard	47
Carlos Pena	46
David Ortiz	35
Carlos Beltran	33

Ken Griffey, Jr.	30	
TOTAL	295	

# 13) Assistment #182549 ''182549 - 12b) Write a comp...''

12b) Write a comparison statement using differences.

Player	Number of Homeruns
Alex Rodriguez	54
Prince Fielder	50
Ryan Howard	47
Carlos Pena	46
David Ortiz	35
Carlos Beltran	33
Ken Griffey, Jr.	30
TOTAL	295

# Homerun Statistics for the 2007-2008 Baseball Season

14) Assistment #182550 ''182550 - 12c) Write a comp...''
12c) Write a comparison statement using percents.
Homerun Statistics for the 2007-2008 Baseball Season

Player	Number of Homeruns
Alex Rodriguez	54
Prince Fielder	50

Ryan Howard	47
Carlos Pena	46
David Ortiz	35
Carlos Beltran	33
Ken Griffey, Jr.	30
TOTAL	295



#### 15) Assistment #182551 "182551 - PART C: Answer th..."

PART C: Answer the following questions using part-to-part or part-to-whole ratios. Show all work on a separate sheet of paper!

13. You are making iced tea to bring to a party. Consider the following mixes.

MIX A	MIX B	MIX C
2 scoops powder	10 scoops powder	5 scoops powder
3 cups water	13 cups water	7 cups water

Which mix is the strongest tasting? Show work to support your answer.

O C. Mix C

- 🔘 B. Mix B
- 🔘 A. Mix A

#### 16) Assistment #182552 "182552 - PART C: Answer th..."

PART C: Answer the following questions using part-to-part or part-to-whole ratios. Show all work on a separate sheet of paper!

14. Charlie is bringing hot pretzels to 2 class parties, one in reading class and one in math class. He is bringing 35 pretzels to reading and 39 pretzels to math. His reading class has 24 students and his math class has 28 students. In which class do you get more pretzels per person? Show work to support your answer.

- B. Math Class
- A. Reading Class

#### 17) Assistment #182553 "182553 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 15. You can buy 5 Yankees tickets on eBay for \$425.

a. Complete the rate table below.

# of tickets	1	2	3	4	5
Price					\$425

I have completed the tabl. It was very difficult.

- I could not complete the table.
- I have completed the table. It was not difficult.
- I have completed the table. It was somewhat difficult.

#### 18) Assistment #182554 "182554 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! Use the table to answer the following question.

15 b. How many tickets can you buy with \$595?

#### 19) Assistment #182555 "182555 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

16. You are traveling a distance of 230 miles in 3.15 hours. At what rate are you traveling?

#### 20) Assistment #182556 "182556 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

17. You are making a scale model of your bedroom. The scale model has to be 10 inches wide. Your bedroom is 9 feet wide and 11 feet long. How long should your scale model be?

a. Set up a proportion using RATIOS

#### 21) Assistment #182557 "182557 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

17. You are making a scale model of your bedroom. The scale model has to be 10 inches wide. Your bedroom is 9 feet wide and 11 feet long. How long should your scale model be?

b. Set up a proportion using RATES

#### 22) Assistment #182558 ''182558 - PART D: Answer th...''

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 18. Find the value of x.

http://assistments.org/build/print/sequence/37693?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

a. using scale factor:

$$\frac{4}{11} = \frac{12}{x}$$

# 23) Assistment #182559 "182559 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 18. Find the value of x.

b. using cross-multiplication:

 $\frac{19.5}{15} = \frac{x}{10}$ 

24) Assistment #46632 "46632 - Converting a Fraction to a Percent"

Convert 
$$\frac{6}{8}$$
 into a **percent**.

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

**25)** Assistment #227736 "227736 - Solving Percent Problems" What is 14% of 80?

**26**) Assistment #210507 "210507 - Solving for an Unknown in a Proportion" Find the value of **c** that makes the fraction equivalent.



**27**) Assistment #64083 ''64083 - 30835 - Solve for x (1.4)'' Solve for x. 5 - 11x = -5

Answer as a fraction.

28) Assistment #48760 ''48760 - Greatest Common Factor''

Find the greatest common factor for 36 and 24.

**29**) Assistment #125757 "125757 - Choose all the PR..." Choose all the PRIME FACTORS of 1815.

11
3
5
7
1
6

30) Assistment #62274  $^{\prime\prime}62274$  - Divisibility by 9 $^{\prime\prime}$ 

Which number is divisible by 9?

%v{a}
 %v{b}
 %v{c}
 %v{d}
 %v{e}

Problem Set "Mid Test of Comparing and Scaling from WPI" id:[37655]

1) Assistment #46633 "46633 - Converting a Fraction to a Percent"

Convert  $\frac{4}{5}$  into a percent.

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

2) Assistment #227735 "227735 - Solving Percent Problems" What is 92% of 50?

**3**) Assistment #210508 ''210508 - Solving for an Unknown in a Proportion'' Find the value of **a** that makes the fraction equivalent.

60		10
	=	
a		5

4) Assistment #64084 ''64084 - 30835 - Solve for x (1.4)'' Solve for x.
8 - 6x = -5

Answer as a fraction.

**5)** Assistment #48761 "48761 - Greatest Common Factor" Find the greatest common factor for 63 and 42.

6) Assistment #62275 "62275 - Radius from area of circle"

What is the radius of the circle when the area of the circle is  $\sqrt[8]{v}$  (use 3.14 for  $\prod$ )



image not to scale

7) Assistment #125758 ''125758 - Choose all the PR...'' Choose all the PRIME FACTORS of 12375.



#### Problem Set "Post Test of Comparing and Scaling from WPI" id:[37653]

#### 1) Assistment #182537 "182537 - 1. The ratio of t..."

1. The ratio of tulips to lilies in a flower arrangement is 2 to 17. Find an equivalent ratio.

- D. 3 to 18
- C. 34 to 4
- A. 17 to 2
- B. 1 to 8.5

#### 2) Assistment #182538 ''182538 - 2. Jessica is sel...''

2. Jessica is selling tickets to the school musical. She sells 6 student tickets, 9 adult tickets, and 8 senior tickets. Write the ratio of adult tickets to student tickets in 3 ways.

- D. 8:6; 8 to 6; 8/6
- C. 9:8; 9 to 8; 9/8
- A. 9:6; 9 to 6; 9/6
- B. 6:9; 6 to 9: 6/9

#### 3) Assistment #182539 "182539 - 3. The ratio of f..."

3. The ratio of fruit to ice in a fruit smoothie is 7 to 4. What percent of the total smoothie is fruit?

- B. 57%
- A. 175%
- O C. 36%
- D. 64%

#### 4) Assistment #182540 "182540 - 4. A dessert reci..."

4. A dessert recipe calls for 3 cups sugar and 4 cups cocoa powder. If you are following the recipe but using 12 cups of cocoa powder, how much sugar do you need?

- B. 16 cups
- D. 6 cups
- C. 9 cups
- A. 12 cups

#### 5) Assistment #182541 ''182541 - 5. Mix A uses 2 s...''

5. Mix A uses 2 scoops powder and 5 ounces water. Mix B uses 16 scoops powder and 22 ounces water. Which 2 ratios would you want to compare to determine which mix is strongest?

- B. 5/2 vs. 22/16
- O C. 5/7 vs. 22/38
- A. 2/5 vs. 16/22
- D. 2/7 vs. 16/38

# 6) Assistment #182542 ''182542 - 6. A car travels ...''

6. A car travels 200 miles using 7 gallons of gas. At that rate, how far can the car travel using 35 gallons of gas?

- A. 1,000 miles
- C. 900 miles
- D. 1,500 miles
- B. 1,200 miles

## 7) Assistment #182543 ''182543 - 7. You can buy 8 ...''

7. You can buy 8 cupcakes for \$4.64. What is the unit price?

- 🔘 D. \$1.25
- A. \$0.60
- O C. \$0.58
- B. \$1.72

8) Assistment #182544 "182544 - 8. Find the value..."

$$\frac{7}{3} = \frac{?}{27}$$

O D. 70

O B. 63

- O A. 84
- O C. 49

9) Assistment #182545 ''182545 - 9. Find the value...''

$$\frac{6}{16} = \frac{9}{?}$$

O D. 36

O A. 24

O C. 42

🔘 B. 30

#### 10) Assistment #182546 "182546 - 10. The ratio of ..."

10. The ratio of dogs to cats is 3 to 5. There are 15 dogs. How many cats are there?

O D. 12

- O C. 25
- 🔘 A. 9
- 🔘 B. 30

#### 11) Assistment #182547 "182547 - Use the following..."

Use the following table to answer questions 11 & 12. Show all work on separate sheet of paper.

11. What percent of the homeruns (listed in the table) did Alex Rodriguez hit?

Player	Number of Homeruns
Alex Rodriguez	54
Prince Fielder	50
Ryan Howard	47
Carlos Pena	46
David Ortiz	35
Carlos Beltran	33
Ken Griffey, Jr.	30
TOTAL	295
TOTAL	295

Homerun Statistics for the 2007-2008 Baseball Season

# 12) Assistment #182548 "182548 - 12. Using the inf..."

12. Using the information in the table:

a) Write a comparison statement using ratios

Homerun Statistics for the 2007-2008 Baseball Season

Player	Number of Homeruns	
Alex Rodriguez	54	
Prince Fielder	50	
Ryan Howard	47	
Carlos Pena	46	
David Ortiz	35	
Carlos Beltran	33	

Ken Griffey, Jr.	30		
TOTAL	295		

# 13) Assistment #182549 ''182549 - 12b) Write a comp...''

12b) Write a comparison statement using differences.

Player	Number of Homeruns		
Alex Rodriguez	54		
Prince Fielder	50		
Ryan Howard	47		
Carlos Pena	46		
David Ortiz	35		
Carlos Beltran	33		
Ken Griffey, Jr.	30		
TOTAL	295		

# Homerun Statistics for the 2007-2008 Baseball Season

14) Assistment #182550 "182550 - 12c) Write a comp..."
12c) Write a comparison statement using percents.
Homerun Statistics for the 2007-2008 Baseball Season

Player	Number of Homeruns		
Alex Rodriguez	54		
Prince Fielder	50		

Ryan Howard	47
Carlos Pena	46
David Ortiz	35
Carlos Beltran	33
Ken Griffey, Jr.	30
TOTAL	295



#### 15) Assistment #182551 "182551 - PART C: Answer th..."

PART C: Answer the following questions using part-to-part or part-to-whole ratios. Show all work on a separate sheet of paper!

13. You are making iced tea to bring to a party. Consider the following mixes.

MIX A	MIX B	MIX C
2 scoops powder	10 scoops powder	5 scoops powder
3 cups water	13 cups water	7 cups water

Which mix is the strongest tasting? Show work to support your answer.

O C. Mix C

- 🔘 B. Mix B
- 🔘 A. Mix A

#### 16) Assistment #182552 "182552 - PART C: Answer th..."

PART C: Answer the following questions using part-to-part or part-to-whole ratios. Show all work on a separate sheet of paper!

14. Charlie is bringing hot pretzels to 2 class parties, one in reading class and one in math class. He is bringing 35 pretzels to reading and 39 pretzels to math. His reading class has 24 students and his math class has 28 students. In which class do you get more pretzels per person? Show work to support your answer.

- O B. Math Class
- A. Reading Class

#### 17) Assistment #182553 "182553 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 15. You can buy 5 Yankees tickets on eBay for \$425.

a. Complete the rate table below.

# of tickets	1	2	3	4	5
Price					\$425

I have completed the tabl. It was very difficult.

- I could not complete the table.
- I have completed the table. It was not difficult.
- I have completed the table. It was somewhat difficult.

#### 18) Assistment #182554 "182554 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! Use the table to answer the following question.

15 b. How many tickets can you buy with \$595?

#### 19) Assistment #182555 "182555 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

16. You are traveling a distance of 230 miles in 3.15 hours. At what rate are you traveling?

#### 20) Assistment #182556 "182556 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

17. You are making a scale model of your bedroom. The scale model has to be 10 inches wide. Your bedroom is 9 feet wide and 11 feet long. How long should your scale model be?

a. Set up a proportion using RATIOS

#### 21) Assistment #182557 "182557 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work!

17. You are making a scale model of your bedroom. The scale model has to be 10 inches wide. Your bedroom is 9 feet wide and 11 feet long. How long should your scale model be?

b. Set up a proportion using RATES

#### 22) Assistment #182558 ''182558 - PART D: Answer th...''

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 18. Find the value of x.

http://assistments.org/build/print/sequence/37653?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

a. using scale factor:

$$\frac{4}{11} = \frac{12}{x}$$

23) Assistment #182559 "182559 - PART D: Answer th..."

PART D: Answer the following questions related to rates, scale factor, and proportions. Show all work! 18. Find the value of x.

b. using cross-multiplication:

 $\frac{19.5}{15} = \frac{x}{10}$ 

24) Assistment #46634 "46634 - Converting a Fraction to a Percent"

5 Convert — into a **percent**. 11

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

**25) Assistment #227734 "227734 - Solving Percent Problems"** What is 53% of 80?

**26**) Assistment #210509 "210509 - Solving for an Unknown in a Proportion" Find the value of **d** that makes the fraction equivalent.


**27**) Assistment #64085 ''64085 - 30835 - Solve for x (1.4)'' Solve for x. 2 - 10x = -2

Answer as a fraction.

**28**) Assistment #48762 ''48762 - Greatest Common Factor'' Find the greatest common factor for 84 and 56.

**29)** Assistment #62276 ''62276 - 58787 - Area of the irregular figure'' What is the area of this object with given information? use 3.14 for  $\prod$ .

%v{diameter}

%v{height}

%v{base}

image not to scale

**30**) Assistment #125759 "125759 - Choose all the PR..." Choose all the PRIME FACTORS of 45375.

18

Problem Set "Converting between decimals, fractions, and percents - THE SKILL BUILDING SET" id:[6849]

1) Assistment #46689 "46689 - Converting Percents to Fractions"

Convert 12% into a fraction.

2) Assistment #46649 "46649 - Converting a Fraction to a Percent"



Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

3) Assistment #46597 "46597 - Converting a Decimal to a Percent"

Convert 0.59 into a **percent**.

4) Assistment #46681 "46681 - Converting Percents to Fractions"

Convert 31% into a fraction.

5) Assistment #46657 "46657 - Converting a Percent to a Decimal"

Convert 49% into a decimal.

6) Assistment #46572 "46572 - Converting a Percent to a Decimal"

Convert 98% into a decimal.

7) Assistment #46668 ''46668 - Converting Percents to Decimals''

Convert 80.77% into a decimal.

8) Assistment #46658 "46658 - Converting a Percent to a Decimal"

Convert 93% into a decimal.

9) Assistment #46553 "46553 - Converting Percents to Decimals"

Convert 77.62% into a decimal.

10) Assistment #46533 ''46533 - Converting Percents to Fractions''

Convert 10% into a fraction.

11) Assistment #46673 "46673 - Converting Percents to Fractions"

Convert 10% into a fraction.

12) Assistment #46571 "46571 - Converting a Percent to a Decimal"

Convert 48% into a decimal.

13) Assistment #46664 "46664 - Converting Percents to Decimals"

Convert 92.46% into a decimal.

14) Assistment #46650 "46650 - Converting a Fraction to a Percent"

Convert 
$$\frac{5}{8}$$
 into a percent.

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

15) Assistment #46537 "46537 - Converting Percents to Fractions"

Convert 50% into a fraction.

16) Assistment #46672 "46672 - Converting Percents to Fractions"

Convert 75% into a fraction.

17) Assistment #46659 "46659 - Converting a Percent to a Decimal"

Convert 23% into a decimal.

18) Assistment #46579 "46579 - Converting a Percent to a Decimal"

Convert 86% into a decimal.

19) Assistment #46666 "46666 - Converting Percents to Decimals"

Convert 82.84% into a decimal.

20) Assistment #46652 "46652 - Converting a Percent to a Decimal"

Convert 48% into a decimal.

21) Assistment #46598 "46598 - Converting a Decimal to a Percent"

Convert 0.73 into a **percent**.

http://assistments.org/build/print/sequence/6849?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

#### 22) Assistment #46625 "46625 - Converting a Decimal to a Percent"

Convert 0.64 into a **percent**.

23) Assistment #46643 "46643 - Converting a Fraction to a Percent"

Convert  $\frac{5}{9}$  into a percent.

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

24) Assistment #46574 "46574 - Converting a Percent to a Decimal"

Convert 44% into a decimal.

25) Assistment #46621 "46621 - Converting a Decimal to a Percent"

Convert 0.01 into a **percent**.

26) Assistment #46635 "46635 - Converting a Fraction to a Percent"

Convert  $\frac{6}{10}$  into a percent.

Round your answer to the nearest percent. Enter your answer without the percent sign. For example, if the answer is 27% enter 27.

27) Assistment #46654 "46654 - Converting a Percent to a Decimal"

Convert 35% into a decimal.

28) Assistment #46644 "46644 - Converting a Fraction to a Percent"

#### Problem Set "Percent Of" id:[37146]

#### 1) Assistment #227797 "227797 - Percent of - Word problem 1"

Chris has 777 comics. He decides to give 46% of them to a friend as a birthday present. How many comics does Chris give away?

#### Round your answer to the nearest whole number.

#### 2) Assistment #227803 "227803 - Percent of - Word problem 1"

Ryan has 381 cookies. He decides to give 28% of them to a friend as a birthday present. How many cookies does Ryan give away?

#### Round your answer to the nearest whole number.

3) Assistment #227785 "227785 - Percent of - Word problem 1"

Andrew has 719 gumballs. He decides to give 86% of them to a friend as a birthday present. How many gumballs does Andrew give away?

#### Round your answer to the nearest whole number.

4) Assistment #227795 "227795 - Percent of - Word problem 1"

David has 474 cookies. He decides to give 13% of them to a friend as a birthday present. How many cookies does David give away?

#### Round your answer to the nearest whole number.

#### 5) Assistment #227779 "227779 - Percent of - Word problem 1"

David has 294 cookies. He decides to give 13% of them to a friend as a birthday present. How many cookies does David give away?

#### Round your answer to the nearest whole number.

#### 6) Assistment #227737 "227737 - Percent of" What is 170% of 60?

http://assistments.org/build/print/sequence/37146?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

# 7) Assistment #227804 ''227804 - Percent of - Word problem 1''

Tom has 413 cookies. He decides to give 14% of them to a friend as a birthday present. How many cookies does Tom give away?

# Round your answer to the nearest whole number.

# 8) Assistment #227711 "227711 - Solving Percent Problems"

What is 75% of 90?

# 9) Assistment #227771 ''227771 - Percent of''

What is 180% of 60?

# 10) Assistment #227776 ''227776 - Percent of - Word problem 1''

Chris has 317 cookies. He decides to give 55% of them to a friend as a birthday present. How many cookies does Chris give away?

# Round your answer to the nearest whole number.

# 11) Assistment #227777 ''227777 - Percent of - Word problem 1''

David has 768 gumballs. He decides to give 95% of them to a friend as a birthday present. How many gumballs does David give away?

# Round your answer to the nearest whole number.

# 12) Assistment #227856 "227856 - Percent of - Word problem 3"

Anthony is running a lemonade stand. He expects to make \$108 for the day, but ends up making 204% of that amount. How much money did Anthony make that day?

# 13) Assistment #227736 "227736 - Solving Percent Problems"

What is 14% of 80?

**14)** Assistment #227730 "227730 - Solving Percent Problems" What is 34% of 80?

15) Assistment #227802 "227802 - Percent of - Word problem 1"

Ryan has 959 cookies. He decides to give 94% of them to a friend as a birthday present. How many cookies does Ryan give away?

#### Round your answer to the nearest whole number.

**16)** Assistment #227754 ''227754 - Percent of'' What is 170% of 50?

17) Assistment #227726 ''227726 - Solving Percent Problems''

What is 83% of 60?

#### 18) Assistment #227855 "227855 - Percent of - Word problem 3"

Tracy is running a lemonade stand. She expects to make \$97 for the day, but ends up making 462% of that amount. How much money did Tracy make that day?

#### 19) Assistment #227798 "227798 - Percent of - Word problem 1"

Ryan has 829 cookies. He decides to give 10% of them to a friend as a birthday present. How many cookies does Ryan give away?

#### Round your answer to the nearest whole number.

20) Assistment #227734 ''227734 - Solving Percent Problems''

What is 53% of 80?

21) Assistment #227742 "227742 - Percent of"

What is 120% of 50?

#### 22) Assistment #227793 "227793 - Percent of - Word problem 1"

Andrew has 978 comics. He decides to give 36% of them to a friend as a birthday present. How many comics does Andrew give away?

#### Round your answer to the nearest whole number.

#### 23) Assistment #227850 "227850 - Percent of - Word problem 3"

http://assistments.org/build/print/sequence/37146?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

Tracy is running a lemonade stand. She expects to make \$77 for the day, but ends up making 307% of that amount. How much money did Tracy make that day?

24) Assistment #227713 "227713 - Solving Percent Problems"

What is 99% of 60?

#### 25) Assistment #227852 "227852 - Percent of - Word problem 3"

Anthony is running a lemonade stand. He expects to make \$53 for the day, but ends up making 437% of that amount. How much money did Anthony make that day?

#### 26) Assistment #227739 "227739 - Percent of"

What is 130% of 60?

#### 27) Assistment #227823 "227823 - Percent of - Word problem 2"

Rebecca went shopping with \$97 in her pocket, but she didn't want to spend it all. She decided to spend 62% of her money at most, and save the rest for later. How much was Rebecca willing to spend?

#### 28) Assistment #227841 "227841 - Percent of - Word problem 3"

Tracy is running a lemonade stand. She expects to make \$117 for the day, but ends up making 319% of that amount. How much money did Tracy make that day?

#### 29) Assistment #227827 "227827 - Percent of - Word problem 2"

Daisy went shopping with \$137 in her pocket, but she didn't want to spend it all. She decided to spend 42% of her money at most, and save the rest for later. How much was Daisy willing to spend?

30) Assistment #227746 "227746 - Percent of" What is 190% of 90?

#### 31) Assistment #227805 "227805 - Percent of - Word problem 1"

Andrew has 200 comics. He decides to give 50% of them to a friend as a birthday present. How many comics does Andrew give away?

#### Round your answer to the nearest whole number.

http://assistments.org/build/print/sequence/37146?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

#### Problem Set "Equivalent Fractions?" id:[35085]

1) Assistment #210613 ''210613 - 160773 - Convert mixed number to improper number - Level 1'' Convert the following to an improper fraction:



2) Assistment #210663 "210663 - 196425 - Equivalent Fractions - multiplier - numer"
Find the numerator of a fraction equivalent to the fraction below with the denominator of 30.
3

**3**) Assistment #210615 ''210615 - 160773 - Convert mixed number to improper number - Level 1'' Convert the following to an improper fraction:



**4**) Assistment #210505 ''210505 - Solving for an Unknown in a Proportion'' Find the value of **b** that makes the fraction equivalent.

 $\frac{60}{b} = \frac{12}{6}$ 

5) Assistment #210537 ''210537 - Improper Fraction to Mixed Number''

Convert the improper fraction below to a mixed number.

- 33
- 4

6) Assistment #210642 ''210642 - 161219 - 160773 - Convert mixed number to improper number - Level 2'' Convert the following to an improper fraction:



7) Assistment #210682 ''210682 - Assistment #107610''		
Find the <b>denominator</b> of a <b>fraction</b> equivalent to the fraction below with the <b>numerator</b> of 27.		
3		
6		

8) Assistment #210506 ''210506 - Solving for an Unknown in a Proportion'' Find the value of **d** that makes the fraction equivalent.



9) Assistment #210510 ''210510 - Solving for an Unknown in a Proportion'' Find the value of **a** that makes the fraction equivalent.





## 10) Assistment #210640 ''210640 - Improper Fraction to Mixed Number''

Convert the improper fraction below to a mixed number.

- 49
- 7

11) Assistment #210620 "210620 - Improper Fraction to Mixed Number"
 Convert the improper fraction below to a mixed number.
 20
 3

**12**) Assistment #210617 "210617 - 160773 - Convert mixed number to improper number - Level 1" Convert the following to an improper fraction:



**13**) Assistment #210545 "210545 - Solving for an Unknown in a Proportion" Find the value of **d** that makes the fraction equivalent.



14) Assistment #210516 "210516 - Improper Fraction to Mixed Number"
Convert the improper fraction below to a mixed number.
35
6

15) Assistment #210629 "210629 - 161901 - Reducing Fractions to Lowest Terms (Level 2)" Simplify the following fraction into its lowest terms. 20 12

http://assistments.org/build/print/sequence/35085?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

12 30 2) Assistment #210538 ''210538 - Improper Fraction to Mixed Number'' Convert the improper fraction below to a mixed number. 49 4 30 4 30 5) Assistment #210688 ''210688 - Assistment #107610'' Find the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7 5) Assistment #210679 ''210679 - Assistment #107610''
30         30         30         30         31         32         33         34         35         36         37         38         39         39         39         39         39         39         39         39         39         39         39         39         39         39         39         30         30         30         30         30         30         30         31         32         33         34         35         36         37         36         37         38         39         39         39         39         39         39         39         39         39         30         30
30         a) Assistment #210538 ''210538 - Improper Fraction to Mixed Number''         onvert the improper fraction below to a mixed number.         49         4         b) Assistment #210688 ''210688 - Assistment #107610''         ind the denominator of a fraction equivalent to the fraction below with the numerator of 16.         4         7         b) Assistment #210679 ''210679 - Assistment #107610''
Assistment #210538 ''210538 - Improper Fraction to Mixed Number''         onvert the improper fraction below to a mixed number.         49         4         0         Assistment #210688 ''210688 - Assistment #107610''         ind the denominator of a fraction equivalent to the fraction below with the numerator of 16.         4         7         0         Assistment #210679 ''210679 - Assistment #107610''
Assistment #210538 ''210538 - Improper Fraction to Mixed Number''         onvert the improper fraction below to a mixed number.         49         4         9         4         9         4         9         4         9         9         4         9         4         9         9         4         9         9         9         9         4         9
Assistment #210538 ''210538 - Improper Fraction to Mixed Number''         onvert the improper fraction below to a mixed number.         49         4         9         4         9         4         9         4         9         9         4         9         9         4         9         4         9         9         4         9         9         4         9         9         4         9
) Assistment #210538 "210538 - Improper Fraction to Mixed Number" onvert the improper fraction below to a mixed number. 49 4 4 ) Assistment #210688 "210688 - Assistment #107610" ind the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7 ) Assistment #210679 "210679 - Assistment #107610"
<pre>convert the improper fraction below to a mixed number. 49 4 4 6) Assistment #210688 "210688 - Assistment #107610" ind the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7</pre>
49 4 4 4 4 5) Assistment #210688 "210688 - Assistment #107610" 5) Assistment #210688 "210688 - Assistment #107610" 7 7 9) Assistment #210679 "210679 - Assistment #107610"
4 B) Assistment #210688 "210688 - Assistment #107610" Find the denominator of a fraction equivalent to the fraction below with the numerator of 16. 7 P) Assistment #210679 "210679 - Assistment #107610"
4 B) Assistment #210688 ''210688 - Assistment #107610'' Find the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7 P) Assistment #210679 ''210679 - Assistment #107610''
Assistment #210688 ''210688 - Assistment #107610'' ind the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7 Assistment #210679 ''210679 - Assistment #107610''
a) Assistment #210688 "210688 - Assistment #107610" ind the denominator of a fraction equivalent to the fraction below with the numerator of 16. 4 7 b) Assistment #210679 "210679 - Assistment #107610"
<ul> <li>a) Assistment #210688 ''210688 - Assistment #107610''</li> <li>b) Assistment denominator of a fraction equivalent to the fraction below with the numerator of 16.</li> <li>4</li> <li>7</li> <li>b) Assistment #210679 ''210679 - Assistment #107610''</li> </ul>
<ul> <li>a) Assistment #210688 ''210688 - Assistment #107610''</li> <li>b) Assistment #210679 ''210679 - Assistment #107610''</li> </ul>
a) Assistment #210688 "210688 - Assistment #107610" b) Assistment #210688 "210688 - Assistment #107610" b) Assistment #210679 "210679 - Assistment #107610"
b) Assistment #210688 ''210688 - Assistment #107610'' b) Assistment #210688 ''210688 - Assistment #107610'' b) Assistment #210679 ''210679 - Assistment #107610''
7 9) Assistment #210679 ''210679 - Assistment #107610''
4 7 9) Assistment #210679 ''210679 - Assistment #107610''
7 P) Assistment #210679 ''210679 - Assistment #107610''
9) Assistment #210679 ''210679 - Assistment #107610''
) Assistment #210679 ''210679 - Assistment #107610''
9) Assistment #210679 ''210679 - Assistment #107610''
9) Assistment #210679 ''210679 - Assistment #107610''
) Assistment #210679 ''210679 - Assistment #107610''
1
)) Assistment #2106/1 "2106/1 - Reducing fractions to lowest terms - Level 1"
reduce the following fraction to its lowest terms:
<u></u>
15
40
1) Assistment #210514 "210514 - Improper Fraction to Mived Number"
1) Assistment #210514 ''210514 - Improper Fraction to Mixed Number''
1) Assistment #210514 ''210514 - Improper Fraction to Mixed Number'' Convert the improper fraction below to a mixed number.
1) Assistment #210514 ''210514 - Improper Fraction to Mixed Number'' Convert the improper fraction below to a mixed number. 37
1) Assistment #210514 ''210514 - Improper Fraction to Mixed Number'' Convert the improper fraction below to a mixed number. 37 6

Problem Set "Equation Solving Two or Fewer Steps - THE SKILL BUILDING SET" id:[8744]

1) Assistment #64094 ''64094 - 30835 - Solve for x (1.4)'' Solve for x. 3 - 3x = 2

Answer as a fraction.

2) Assistment #64044 "64044 - 30834 - Solve for x (1.3)" Solve for x.

15x - 8x = -3

Answer as a fraction.

3) Assistment #64016 "64016 - 58064 - Solve - decimal" Solve for x. 2.55x + 3 = 10.59

Answer as a fraction.

4) Assistment #64025 ''64025 - 55932 - Solving Equations 1.0'' Solve for n:

n + 1 = 17.3

5) Assistment #64092 ''64092 - 30835 - Solve for x (1.4)'' Solve for x. 9 - 7x = 8

Answer as a fraction.

6) Assistment #64064 ''64064 - 30461 - Solve for x (1.1)'' Solve for x. 7x + 5x = -6

Answer as a fraction.

7) Assistment #64047 "64047 - 30834 - Solve for x (1.3)"

Solve for x.

17x - 11x = 5

Answer as a fraction.

8) Assistment #64054 "64054 - 30461 - Solve for x (1.1)" Solve for x. 4x + 7x = -2

Answer as a fraction.

9) Assistment #63997 "63997 - 58064 - Solve - decimal" Solve for x. 11.08 + x + 9.62 = 13.43

**10**) Assistment #63998 ''63998 - 58064 - Solve - decimal'' Solve for x. 11.16 + x + 13.98 = 3.5

**11)** Assistment #64043 "64043 - 30834 - Solve for x (1.3)" Solve for x.

8x - 2x = -9

Answer as a fraction.

**12**) Assistment #64057 ''64057 - 30461 - Solve for x (1.1)'' Solve for x. 11x + 3x = 4

Answer as a fraction.

**13**) Assistment #64013 ''64013 - 58064 - Solve - decimal'' Solve for x. 3.05x + 7.31 = 8.37

Answer as a fraction.

**14)** Assistment #64010 ''64010 - 58064 - Solve - decimal'' Solve for x. 0.67 + x + 1.93 = 7.88

**15**) Assistment #64037 ''64037 - 55932 - Solving Equations 1.0'' Solve for n:

n + 0.8 = 5.6

**16)** Assistment #64065 ''64065 - 30461 - Solve for x (1.1)'' Solve for x. 8x + 8x = -4

Answer as a fraction.

**17**) Assistment #64083 ''64083 - 30835 - Solve for x (1.4)'' Solve for x. 5 - 11x = -5

Answer as a fraction.

**18)** Assistment #64091 ''64091 - 30835 - Solve for x (1.4)'' Solve for x. 7 - 3x = 8

Answer as a fraction.

**19**) Assistment #64018 "64018 - 58064 - Solve - decimal" Solve for x. 8.74x + 7.98 = 4.56

Answer as a fraction.

**20**) Assistment #64011 ''64011 - 58064 - Solve - decimal'' Solve for x. 3.21x + 10.39 = 11.2

Answer as a fraction.

Answer as a fraction.

**22)** Assistment #64009 ''64009 - 58064 - Solve - decimal'' Solve for x. 4.98 + x + 4.79 = 8.52

**23**) Assistment #64068 ''64068 - 58064 - Solve - decimal'' Solve for x. x - 6.23 = 12.75

**24)** Assistment #64058 ''64058 - 30461 - Solve for x (1.1)'' Solve for x. 10x + 2x = 7

Answer as a fraction.

**25**) Assistment #64024 ''64024 - 58064 - Solve - decimal'' Solve for x. 12.79x + 3.22 = 6.08

Answer as a fraction.

**26)** Assistment #64042 ''64042 - 30834 - Solve for x (1.3)'' Solve for x.

13x - 5x = 2

Answer as a fraction.

27) Assistment #64055 ''64055 - 30461 - Solve for x (1.1)'' Solve for x. 5x + 10x = 7

Answer as a fraction.

#### Problem Set "Greatest Common Factor - THE SKILL BUILDING SET" id:[6921]

1) Assistment #48914 "48914 - Greatest Common Factor" Find the greatest common factor for 60 and 40.

**2**) Assistment #48852 "48852 - Greatest Common Factor" Find the greatest common factor for 60 and 40.

**3)** Assistment #48768 "48768 - Greatest Common Factor" Find the greatest common factor for 30 and 20.

**4)** Assistment #48760 "48760 - Greatest Common Factor" Find the greatest common factor for 36 and 24.

**5)** Assistment #48910 "48910 - Greatest Common Factor" Find the greatest common factor for 45 and 30.

6) Assistment #48838 "48838 - Greatest Common Factor" Find the greatest common factor for 42 and 28.

7) Assistment #48752 ''48752 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**8**) Assistment #48786 "48786 - Greatest Common Factor" Find the greatest common factor for 45 and 30.

**9)** Assistment #48890 "48890 - Greatest Common Factor" Find the greatest common factor for 24 and 16.

**10**) Assistment #48787 ''48787 - Greatest Common Factor'' Find the greatest common factor for 36 and 24.

**12**) Assistment #48881 ''48881 - Greatest Common Factor'' Find the greatest common factor for 60 and 40.

**13**) Assistment #48877 "48877 - Greatest Common Factor" Find the greatest common factor for 96 and 64.

**14**) Assistment #48775 ''48775 - Greatest Common Factor'' Find the greatest common factor for 63 and 42.

**15**) Assistment #48785 ''48785 - Greatest Common Factor'' Find the greatest common factor for 48 and 32.

**16)** Assistment #48860 ''48860 - Greatest Common Factor'' Find the greatest common factor for 42 and 28.

**17**) Assistment #48912 ''48912 - Greatest Common Factor'' Find the greatest common factor for 36 and 24.

**18**) Assistment #48911 ''48911 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**19**) Assistment #48909 ''48909 - Greatest Common Factor'' Find the greatest common factor for 63 and 42.

**20**) Assistment #48891 ''48891 - Greatest Common Factor'' Find the greatest common factor for 36 and 24.

21) Assistment #48758 "48758 - Greatest Common Factor"

Find the greatest common factor for 30 and 20.

**22**) Assistment #48749 ''48749 - Greatest Common Factor'' Find the greatest common factor for 36 and 24.

**23**) Assistment #48906 ''48906 - Greatest Common Factor'' Find the greatest common factor for 54 and 36.

**24**) Assistment #48791 ''48791 - Greatest Common Factor'' Find the greatest common factor for 60 and 40.

**25)** Assistment #48907 ''48907 - Greatest Common Factor'' Find the greatest common factor for 45 and 30.

**26**) Assistment #48858 ''48858 - Greatest Common Factor'' Find the greatest common factor for 30 and 20.

**27**) Assistment #48780 ''48780 - Greatest Common Factor'' Find the greatest common factor for 45 and 30.

**28**) Assistment #48767 ''48767 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**29**) Assistment #48854 ''48854 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**30**) Assistment #48763 ''48763 - Greatest Common Factor'' Find the greatest common factor for 48 and 32.

**31**) Assistment #48759 "48759 - Greatest Common Factor" Find the greatest common factor for 36 and 24.

**32**) Assistment #48779 ''48779 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**33**) Assistment #48919 ''48919 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**34)** Assistment #48750 ''48750 - Greatest Common Factor'' Find the greatest common factor for 42 and 28.

**35)** Assistment #48769 ''48769 - Greatest Common Factor'' Find the greatest common factor for 63 and 42.

**36**) Assistment #48917 ''48917 - Greatest Common Factor'' Find the greatest common factor for 63 and 42.

**37**) Assistment #48908 ''48908 - Greatest Common Factor'' Find the greatest common factor for 36 and 24.

**38**) Assistment #48766 ''48766 - Greatest Common Factor'' Find the greatest common factor for 96 and 64.

**39**) Assistment #48853 ''48853 - Greatest Common Factor'' Find the greatest common factor for 96 and 64.

**40**) Assistment #48751 ''48751 - Greatest Common Factor'' Find the greatest common factor for 72 and 48.

**41**) Assistment #48882 "48882 - Greatest Common Factor" Find the greatest common factor for 45 and 30.

### Problem Set "Prime Factor - SKILL BUILDING SET" id:[17316]

1) Assistment #125769 "125769 - Choose all the PR..." Choose all the **PRIME FACTORS** of 5049.

3	
11	
5	
1	
6	
17	

2) Assistment #125741 "125741 - Choose all the PR..." Choose all the PRIME FACTORS of 4563.

3	
13	
7	
1	
8	

**3)** Assistment #157314 "157314 - Prime Factorization" What is the prime factorization of 105?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

**4)** Assistment #157294 "157294 - Prime Factorization" What is the prime factorization of 245?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

5) Assistment #125768 "125768 - Choose all the PR..." Choose all the PRIME FACTORS of 18513.

3	
11	
7	
1	
8	
17	

6) Assistment #125811 "125811 - Choose all the PR..." Choose all the PRIME FACTORS of 3267.

7) Assistment #125816 "125816 - Choose all the PR..." Choose all the PRIME FACTORS of 363.

3
11
17
1
10

8) Assistment #125761 "125761 - Choose all the PR..." Choose all the PRIME FACTORS of 12375.

# 9) Assistment #125840 "125840 - Prime Factorization"

What is the prime factorization of 175?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

# **10**) Assistment #157322 "157322 - Prime Factorization" What is the prime factorization of 105?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

11) Assistment #125745 "125745 - Choose all the PR..." Choose all the **PRIME FACTORS** of 4563.

3
13
11
1
10

**12**) Assistment #157329 "157329 - Prime Factorization" What is the prime factorization of 30?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

**13**) Assistment #157310 "157310 - Prime Factorization" What is the prime factorization of 70?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

**14**) **Assistment #157315 ''157315 - Prime Factorization''** What is the prime factorization of 105?

Your answer should look like 11 x 11 x 5. Use the "x" for the multiplication sign.

**15)** Assistment #125824 "125824 - Choose all the PR..." Choose all the PRIME FACTORS of 400.

**16**) Assistment #125785 "125785 - Choose all the PR..." Choose all the PRIME FACTORS of 4225.

17) Assistment #125829 "125829 - Choose all the PR..." Choose all the PRIME FACTORS of 29645.

**18**) Assistment #125850 "125850 - Choose all the PR..." Choose all the PRIME FACTORS of 45.

#### Problem Set "Divisibility - THE SKILL BUILDING SET" id:[8741]

#### 1) Assistment #63851 ''63851 - 57623 - Divisibility by 10''

Which number is divisible by 10?

- 60 (
- 1861
- 0 1453
- 6 57
- 0 1599

2) Assistment #63837	' ''63837 - 57618 -	Divisibility by 5"
Which number is di	ivisible by 5?	

- 0 1400
- 0 891
- 353
- 0 736
- 0 29

#### 3) Assistment #63833 ''63833 - 57616 - Divisibility by 4''

Which number is divisible by 4?

- 0 156
- 0 1187
- 845
- 6 438
- 0 1350

## 4) Assistment #63840 ''63840 - 57618 - Divisibility by 5'' Which number is divisible by 5?

- 0 1900
- 0 1792
- 0 1343
- 0 1556
- 889

# 5) Assistment #63822 "63822 - 57331 - Divisibility by 3"

Which number is divisible by 3?

- 180
- 0 109

- 0 103
- 113
- 0 167

# 6) Assistment #63857 "63857 - 57624 - Divisibility by 6"

Which number is divisible by 6?

- 114193
- 0 164
- 0 45
- 0 178

#### 7) Assistment #63830 ''63830 - 57616 - Divisibility by 4''

Which number is divisible by 4?

- 0 512
- 0 1043
- 0 1201
- 130
- 0 1958

## 8) Assistment #63809 ''63809 - 57322 - Divisibility by 2''

Which number is divisible by 2?

# 9) Assistment #63820 ''63820 - 57331 - Divisibility by 3''

Which number is divisible by 3?

۲	54

- 0 172
- 0 130
- 6 🔘
- 0 176

10) Assistment #63860 "63860 - 57624 - Divisibility by 6"

Which number is divisible by 6?

- 0 36
- 6 ()
- 0 182
- 0 195
- 40

# 11) Assistment #63850 ''63850 - 57623 - Divisibility by 10''

Which number is divisible by 10?

- 0 1300
- 0 1682
- 0 113
- 6 506
- 0 1119

#### 12) Assistment #63811 ''63811 - 57322 - Divisibility by 2''

Which number is divisible by 2?

- 0 50
- 6 53
- 0 91
- 0 141
- 0 187

# **13**) Assistment #63829 "63829 - 57616 - Divisibility by 4" Which number is divisible by 4?

0 1596

- 0 1275
- 613
- 0 758
- 0 1114

## **14**) Assistment #63853 ''63853 - 57623 - Divisibility by 10'' Which number is divisible by 10?

0 790

- 921
- 0 1673
- 0 756
- 0 1848

```
15) Assistment #63834 ''63834 - 57616 - Divisibility by 4''
```

Which number is divisible by 4?

- 1840
- 0 1463
- 0 1029
- 186
- 1206

**16)** Assistment #63818 ''63818 - 57331 - Divisibility by 3'' Which number is divisible by 3?

0 177

97 🔘

0 91

0 134

0 152

17) Assistment #63828 ''63828 - 57616 - Divisibility by 4''
Which number is divisible by 4?
892

- 0 1311
- 0 285
- 886
- 0 1994

**18**) Assistment #63867 "63867 - 62274 - Divisibility by 9" Which number is divisible by 9?

0 162

0 151

- 0 115
- 0 170
- 6 53
- 0 129

**19**) Assistment #63814 "63814 - 57322 - Divisibility by 2" Which number is divisible by 2?

- 6 54
- 0 37
- 0 75
- 111

Assistment - Printing Content

### Problem Set "Mean - THE SKILL BUILDING SET" id:[19362]

#### 1) Assistment #131681 "131681 - 56565 - Mean with Context"

Nancy obtained the following scores in 5 math tests. Calculate the mean of Nancy's math scores:

182, 94, 57, 67, 112

(round to the nearest hundredths place)

2) Assistment #131728 ''131728 - 56643 - Mean with Missing Number and Context''

Penny swam the following number of laps in four days. How many laps would she need to swim on the fifth day to have a mean of 5.4 laps per day?

1, 9, 6, 7

#### 3) Assistment #131720 "131720 - 56648 - Mean with Context and Vertical Table"

Julia runs a grocery store, and listed below are the store sales for the year 1997. What were the average monthly sales in 1997?

Month	Sales (\$)
January	1001
February	1051
March	2506
April	1121
May	1506
June	604
July	1009
August	2203
September	1012
October	1638
November	1920
December	2054

#### (round to hundredths place)

4) Assistment #131652 "131652 - Mean"

Calculate the **mean** of the following numbers:

3, 15, 17, 7, 21, 19

(round to the nearest tenths place)

#### 5) Assistment #131746 "131746 - 57309 - Mean with Context, 9"

Abby obtained the following scores in 9 math tests. Calculate the **mean** of Abby's math scores:

42, 58, 90, 91, 51, 30, 39, 64, 69

(round to the nearest hundredths place)

6) Assistment #131683 ''131683 - 56565 - Mean with Context''

Hannah obtained the following scores in 5 math tests. Calculate the mean of Hannah's math scores:

205, 83, 45, 124, 89

(round to the nearest hundredths place)

#### 7) Assistment #131739 "131739 - 125327 - Mean with Context, 11"

During a medical study, doctors recorded the weights in pounds of all their volunteers. Some of the weights are given here. What is the average weight of the volunteers listed below? 152, 109, 108, 152, 123, 122, 120, 105, 145, 105, 103

(round to the nearest hundredths place)

#### 8) Assistment #131744 ''131744 - 125360 - Mean with Context and Table 1, 8''

The coach for the School Computer Programming team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 8 games.

Name of player	Number of points scored
Jimmy	12,3,8,13,22,17,11,8
Nathalie	16,27,8,11,13,9,17,25

What is the **mean** (average) number of points scored by Jimmy ? (Round to the hundredths place)

9) Assistment #131645 "131645 - Mean Missing Value"

Chris has scored the following points in his last five basketball games: 12, 9, 8, 5, 11.

How many points must he score in the next game to average 12 points per game?

**10**) Assistment #131586 ''131586 - 56562 - Mean of Integers'' Calculate the mean of the following numbers:

183, 142, 24, 134, 69

(round to the nearest hundredths place)

**11)** Assistment #131626 ''131626 - Mean - Smaller Numbers'' Calculate the mean of the following numbers:

7, 5, 4, 4, 5, 10

(round to the nearest hundredths place)

**12**) Assistment #131635 ''131635 - 57306 - Mean of Integers'' Calculate the mean of the following numbers:

111, 115, 120, 70, 98, 45, 56

(round to the nearest hundredths place)

#### 13) Assistment #131592 "131592 - 125362 - Mean with Context and Table 2"

The coach for the All-Star Basketball team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored
Shaun	10,3,19,14,23,22,13,2,23,13
Julia	20,21,2,12,6,3,23,26,13,14

What is the mean (average) number of points scored by Julia ?

**14**) Assistment #131666 ''131666 - 57307 - Mean of Integers,8'' Calculate the mean of the following numbers:

89, 154, 138, 69, 21, 3, 72, 38

(round to the nearest hundredths place)

#### 15) Assistment #131648 "131648 - Mean Missing Value"

Chris has scored the following points in his last five basketball games: 10, 7, 6, 8, 14.

How many points must he score in the next game to average 14 points per game?

16) Assistment #131614 "131614 - 125324 - Mean with Context, 12"

During a medical study, doctors recorded the heights in centimeters of all their volunteers. Some of the heights are given here. What is the average height of the volunteers listed below?

176, 195, 165, 181, 168, 192, 189, 204, 152, 162, 175, 171

(round to the nearest hundredths place)

http://assistments.org/build/print/sequence/19362?mode=test&op\_scaf=false&op\_hint=fals... 3/28/2012

#### Problem Set "Median - THE SKILL BUILDING SET" id:[21943]

1) Assistment #137385 ''137385 - Median - Find Missing Data Points - Even'' What number should be added to the list below to get a median of 18?

10, 21, 9, 15, 28

11
30
1

0 10

#### 2) Assistment #137491 ''137491 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games
John	40,67,27,80,16,75,57,4,72,24,48
Cristina	22,26,8,11,54,6,9,22,23,18,11

What is the median number of points scored by John?

3) Assistment #137387 "137387 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19?

13, 23, 8, 15, 26

9 🔘

0 14

0 30

04

#### 4) Assistment #137359 "137359 - 56718 - Median with Context and Table and Even values"

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	11,8,14,6,1,20,22,12
Cristina	20,8,27,6,24,22,12,15

What is the median of number of points obtained by Cristina?

5) Assistment #137313 "137313 - 132165 - Median - Find Missing Data Points - Even, 8" What number should be added to the list below to get a **median** of 25.115?

12, 28.23, 35, 19, 61, 8.63, 48

1322

9.63

5.63

#### 6) Assistment #137483 "137483 - 56714 - Median - Find Missing Data Points - Odd, with context"

Mary obtained the following scores in 4 of 5 math tests. If the **median** of Mary's math scores was 21, what was Mary's math score on the fifth test?

14, 26.87, 21, 6 7 15 24 3

#### 7) Assistment #137488 ''137488 - 56714 - Median - Find Missing Data Points - Odd, with context''

John obtained the following scores in 4 of 5 math tests. If the **median** of John's math scores was 17, what was John's math score on the fifth test?

	12,	26.87,	17,	7
8				
13				
26				
<b>0</b> 4				

#### 8) Assistment #137357 ''137357 - 56718 - Median with Context and Table and Even values''

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	6,8,9,9,8,21,26,20
Cristina 18,8,27,4,24,22,12,15

What is the median of number of points obtained by Cristina ?

9) Assistment #137379 "137379 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[1.33, 3.85, 1.65, 2.11, 1.12, 4.51, 2.33, 2.69, 3.91]

What is the **median** number in this list?

**10**) Assistment #137402 ''137402 - Median - Find Missing Data Points - Odd'' What number should be added to the list below to get a **median** of 18?

- 11, 23, 5, 18
- 25
  17
  6

02

# 11) Assistment #137386 "137386 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19.5?

- 14, 22, 9, 17, 25
- 0 10

15

0 33

6

12) Assistment #137466 ''137466 - 56719 - Median with Context and Vertical Table''

Liz runs a grocery store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)
January	1125
February	2506
March	1922
April	607
May	1044
June	901

July	1507
August	1631
September	1006
October	1021
November	2203
December	2054

## 13) Assistment #137472 "137472 - 56719 - Median with Context and Vertical Table"

Ashley runs a shoe store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)
January	1126
February	2504
March	1924
April	601
May	1045
June	903
July	1501
August	1636
September	1002
October	1024
November	2201
December	2050

# 14) Assistment #137336 "137336 - 56717 - Median with Context and Table and Odd values"

The coach for the School Tennis Team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 7 games.

Name of player	Number of points scored on the last ten games
Brian	20,8,15,5,23,22,13
Camille	12,10,12,7,9,23,24

## What is the **median** of number of points scored by Brian ?

Problem Set "Sum of Interior Angles Triangle - THE SKILL BUILDING SET" id:[21257] 1) Assistment #135511 "135511 - 27540 - Sum of Interior Angles - Triangle - Scalene" 109° 59° What is the angle of **a** in the above scalene triangle?

2) Assistment #135476 ''135476 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles''

In the following isosceles triangle, what is the value of angle a in degrees? The angle on the top with one dash is 25°

3) Assistment #135555 ''135555 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles''

In the following isosceles triangle, what is the value of angle a in degrees?

77° 4) Assistment #135534 "135534 - Sum of Interior Angles Triangle - Equilateral" b a С What is the angle of **a** in the above **equilateral triangle**? 5) Assistment #135447 ''135447 - 27540 - Sum of Interior Angles - Triangle - Scalene'' What is the measure of angle a in degrees for the following scalene triangle? 35° 68°

6) Assistment #135561 "135561 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles"

In the following isosceles triangle, what is the value of angle a in degrees?

78°



7) Assistment #135569 ''135569 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles''

In the following isosceles triangle, what is the value of angle a in degrees?

75°

**8**) Assistment #135462 ''135462 - 27540 - Sum of Interior Angles - Triangle - Scalene'' What is the measure of angle a in degrees for the following scalene triangle?

69° 31°

9) Assistment #135565 ''135565 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles''

In the following isosceles triangle, what is the value of angle a in degrees?

84°

### 10) Assistment #135493 ''135493 - 132505 - 27540 - Sum of Interior Angles - Triangle - Isosceles''

In the following isosceles triangle, what is the value of angle a in degrees? The angle on the top with one dash is  $31^{\circ}$ 

### Problem Set "Box and Whisker - THE SKILL BUILDING SET" id:[26902]

## 1) Assistment #157190 ''157190 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.



# **3**) Assistment #157198 ''157198 - 133418 - Box and Whisker - Term to Number'' David made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 91 on the box-and-whisker plot of chocolate chip cookies sold per week?

- oupper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- lower quartile
- median

5) Assistment #157228 ''157228 - 133549 - Box and Whisker - Number to Term''

Billy made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.

26	34	42	50	58	66	74	82	90	98
----	----	----	----	----	----	----	----	----	----

From this plot, what is the term for the value 82 on the box-and-whisker plot of chocolate chip cookies sold per week?

- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile

73

77

81

median

### 6) Assistment #157181 "157181 - 133418 - Box and Whisker - Term to Number"

Billy made a box-and-whisker plot of the number of cups of lemonade that he sold per week in a year.

From this plot, what is the **sample maximum** of cups of lemonade sold per week?

85

### 7) Assistment #157174 ''157174 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.

89

93

97

101

105

109

	32	36	40	44	48	52	56	60	64	68
From th	nis plot, w	hat is the	sample m	aximum o	of chocolat	e bars solo	d per week	?		
8) Assis	tment #15'	7222 ''157	222 - 13354	l9 - Box an	d Whisker	- Number	to Term''			
David r	nade a <b>bo</b> i	x-and-wh	isker plot	on the nu	mber of cl	nocolate cl	hip cookies	s that he so	old per wee	ek in a year.
	27	31	35	39	43	47	51	55	59	63

From this plot, what is the term for the value 45 on the box-and-whisker plot of chocolate chip cookies sold per week?

- 🔘 median
- oupper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile

# 9) Assistment #157217 ''157217 - 133418 - Box and Whisker - Term to Number''

John made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.

 52
 56
 60
 64
 68
 72
 76
 80
 84
 88

From this plot, what is the **range** of chocolate chip cookies sold per week?

**10**) Assistment #157233 ''157233 - 133549 - Box and Whisker - Number to Term'' David made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.

49	57	65	73	81	89	97	105	113	121

From this plot, what is the term for the value 64 on the box-and-whisker plot of chocolate chip cookies sold per week?

- range
- sample minimum
- lower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range

### 11) Assistment #157201 "157201 - 133418 - Box and Whisker - Term to Number"

David made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.

34	42	50	58	66	74	82	90	98	106

From this plot, what is the range of cups of lemonade sold per week?

12) Assistment #157245 ''157245 - 133549 - Box and Whisker - Number to Term'' Steve made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 75 on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample minimum
- Iower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range

13) Assistment #157215 "157215 - 133418 - Box and Whisker - Term to Number"

Billy made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.

67	71	75	79	83	87	91	95	99	103

From this plot, what is the upper quartile of chocolate chip cookies sold per week?

14) As Billy 1	sistment #1	157186 ''15' k-and-whi	7186 - 1334 sker plot (	<b>418 - Box a</b> of the num	nd Whisk	er - Term t	o Number'	Der week ir	n a vear	
Dilly I		x-anu- win	skei piot			pie pies un	u ne solu p		r a year.	
	21	25	29	33	37	41	45	49	53	57
From	this plot, v	what is the	inter-qua	rtile range	e of apple	pies sold p	er week?			

### 15) Assistment #157254 "157254 - 133549 - Box and Whisker - Number to Term"

Steve made a box-and-whisker plot on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 16 on the box-and-whisker plot of apple pies sold per week?

- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- 🔘 median
- o upper quartile
- sample maximum

### 16) Assistment #157241 "157241 - 133549 - Box and Whisker - Number to Term"

Billy made a box-and-whisker plot on the number of chocolate bars that he sold per week in a year.

43	47	51	55	59	63	67	71	75	79
10	• •			0,	00	01	, -	10	. ,

From this plot, what is the term for the value 61 on the box-and-whisker plot of chocolate bars sold per week?

- 🔘 median
- oupper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- lower quartile

## 17) Assistment #157203 ''157203 - 133418 - Box and Whisker - Term to Number''

John made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year.

51 59 67 75 83 91 99 107 115 123

From this plot, what is the range of chocolate chip cookies sold per week?

72 76 80 84 88 92 96 100 104 108

From this plot, what is the median of apple pies sold per week?

#### 20) Assistment #157234 "157234 - 133549 - Box and Whisker - Number to Term"

Steve made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.

76	80	84	88	92	96	100	104	108	112

From this plot, what is the term for the value 16 on the box-and-whisker plot of cups of lemonade sold per week?

- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- median
- o upper quartile
- sample maximum

## 21) Assistment #157219 ''157219 - 133549 - Box and Whisker - Number to Term''

David made a box-and-whisker plot on the number of chocolate bars that he sold per week in a year.



From this plot, what is the term for the value 32 on the box-and-whisker plot of chocolate bars sold per week?

- range
- sample minimum
- Iower quartile
- median
- oupper quartile
- sample maximum
- inter-quartile range

### 22) Assistment #157258 ''157258 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.

29	37	45	53	61	69	77	85	93	101
	0,		00	<b>0</b> 1	0,		00	10	

From this plot, what is the term for the value 85 on the box-and-whisker plot of cups of lemonade sold per week?

- oupper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- median

## 23) Assistment #157177 ''157177 - 133418 - Box and Whisker - Term to Number''

John made a **box-and-whisker plot** of the number of apple pies that he sold per week in a year.

36	44	52	60	68	76	84	92	100	108

From this plot, what is the **range** of apple pies sold per week?

24) Assistment #157206 ''157206 - 133418 - Box and Whisker - Term to Number'' Steve made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year.

47 55 63 71 79 87 95 103 111 119

From this plot, what is the median of chocolate chip cookies sold per week?

## 25) Assistment #157208 ''157208 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of apple pies that he sold per week in a year.



From this plot, what is the lower quartile of apple pies sold per week?

#### 26) Assistment #157263 "157263 - 133549 - Box and Whisker - Number to Term"

David made a **box-and-whisker plot** on the number of chocolate bars that he sold per week in a year.

31	35	39	43	47	51	55	59	63	67

From this plot, what is the term for the value 59 on the box-and-whisker plot of chocolate bars sold per week?

- oupper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum
- Iower quartile
- 🔘 median

## 27) Assistment #157266 ''157266 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 87 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile

#### 28) Assistment #157167 ''157167 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.

18	22	26	30	34	38	42	46	50	54
-				-					-

From this plot, what is the upper quartile of chocolate bars sold per week?

## 29) Assistment #157193 ''157193 - 133418 - Box and Whisker - Term to Number''

John made a box-and-whisker plot of the number of cups of lemonade that he sold per week in a year.

14	18	22	26	30	34	38	42	46	50
----	----	----	----	----	----	----	----	----	----

From this plot, what is the sample minimum of cups of lemonade sold per week?



David made a box-and-whisker plot of the number of apple pies that he sold per week in a year.

	54	62	70	78	86	94	102	110	118	126
--	----	----	----	----	----	----	-----	-----	-----	-----

From this plot, what is the median of apple pies sold per week?

#### 31) Assistment #157243 "157243 - 133549 - Box and Whisker - Number to Term"

Steve made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 65 on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample minimum
- Iower quartile
- 🔘 median
- o upper quartile

- sample maximum
- inter-quartile range
- 🔘 range

#### 32) Assistment #157251 "157251 - 133549 - Box and Whisker - Number to Term"

Billy made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.

67	71	75	79	83	87	91	95	99	103

From this plot, what is the term for the value 85 on the box-and-whisker plot of chocolate chip cookies sold per week?

- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum
- Iower quartile

33) Assistment #157187 "157187 - 133418 - Box and Whisker - Term to Number"

Steve made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year.

31	35	30	13	17	51	55	50	63	67
31	33	39	43	4/	51	55	39	03	0/

From this plot, what is the range of chocolate chip cookies sold per week?

#### 34) Assistment #157236 "157236 - 133549 - Box and Whisker - Number to Term"

Steve made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.

36	40	44	48	52	56	60	64	68	72

From this plot, what is the term for the value 54 on the box-and-whisker plot of cups of lemonade sold per week?

- median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile

## 35) Assistment #157172 ''157172 - 133418 - Box and Whisker - Term to Number''

John made a box-and-whisker plot of the number of cups of lemonade that he sold per week in a year.



From this plot, what is the sample minimum of cups of lemonade sold per week?

#### 36) Assistment #157213 "157213 - 133418 - Box and Whisker - Term to Number"

Steve made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year.

56         60         64         68         72         76         80	84 88 92
--	----------

From this plot, what is the sample maximum of chocolate chip cookies sold per week?

#### 37) Assistment #157247 "157247 - 133549 - Box and Whisker - Number to Term"

Billy made a **box-and-whisker plot** on the number of chocolate bars that he sold per week in a year.



From this plot, what is the term for the value 58 on the box-and-whisker plot of chocolate bars sold per week?

- sample minimum
- Iower quartile
- 🔘 median
- o upper quartile

- sample maximum
- inter-quartile range
- 🔘 range

### 38) Assistment #157207 "157207 - 133418 - Box and Whisker - Term to Number"

John made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.

57	61	65	69	73	77	81	85	89	93

From this plot, what is the lower quartile of chocolate chip cookies sold per week?

## 39) Assistment #157192 ''157192 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the median of chocolate chip cookies sold per week?

40) Assistment #157220 ''157220 - 133549 - Box and Whisker - Number to Term''

Billy made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 16 on the box-and-whisker plot of chocolate chip cookies sold per week?



#### 41) Assistment #157269 ''157269 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 80 on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample minimum
- Iower quartile
- 🔘 median

- o upper quartile
- sample maximum
- inter-quartile range
- range

### 42) Assistment #157264 "157264 - 133549 - Box and Whisker - Number to Term"

John made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

46	54	62	70	78	86	94	102	110	118

From this plot, what is the term for the value 54 on the box-and-whisker plot of cups of lemonade sold per week?

- sample minimum
- Iower quartile
- median
- oupper quartile
- sample maximum
- inter-quartile range
- range

#### 43) Assistment #157248 ''157248 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 33 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile

### 44) Assistment #157196 ''157196 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.

12 20 28 36 44 52 60 68 76	84
----------------------------	----

From this plot, what is the **range** of chocolate chip cookies sold per week?

# 45) Assistment #157168 ''157168 - 133418 - Box and Whisker - Term to Number''

John made a **box-and-whisker plot** of the number of apple pies that he sold per week in a year.

71	75	79	83	87	91	95	99	103	107

From this plot, what is the median of apple pies sold per week?



Billy made a **box-and-whisker plot** of the number of apple pies that he sold per week in a year.

59	67	75	83	91	99	107	115	123	131

From this plot, what is the inter-quartile range of apple pies sold per week?

#### 47) Assistment #157210 "157210 - 133418 - Box and Whisker - Term to Number"

David made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.



From this plot, what is the median of cups of lemonade sold per week?

48) Assistment #157250 ''157250 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of chocolate bars that he sold per week in a year.



From this plot, what is the term for the value 79 on the box-and-whisker plot of chocolate bars sold per week?

sample minimum
 lower quartile
 median
 upper quartile
 sample maximum
 inter-quartile range
 range

#### 49) Assistment #157166 ''157166 - 133418 - Box and Whisker - Term to Number''

John made a box-and-whisker plot of the number of chocolate bars that he sold per week in a year.



From this plot, what is the lower quartile of chocolate bars sold per week?

50) Assistment #157191 "157191 - 133418 - Box and Whisker - Term to Number"

John made a box-and-whisker plot of the number of apple pies that he sold per week in a year.



From this plot, what is the inter-quartile range of apple pies sold per week?

### 51) Assistment #157232 "157232 - 133549 - Box and Whisker - Number to Term"

Steve made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 27 on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample minimum
- Iower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range

52) Assistment #157259 ''157259 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 21 on the box-and-whisker plot of apple pies sold per week?

- sample minimum
   lower quartile
   median
   upper quartile
   sample maximum
   inter-quartile range
- 🔘 range

## 53) Assistment #157179 ''157179 - 133418 - Box and Whisker - Term to Number''

John made a box-and-whisker plot of the number of apple pies that he sold per week in a year.



From this plot, what is the **median** of apple pies sold per week?

54) Assistment #157199 ''157199 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the **range** of chocolate chip cookies sold per week?

### 55) Assistment #157242 "157242 - 133549 - Box and Whisker - Number to Term"

Steve made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 72 on the box-and-whisker plot of chocolate chip cookies sold per week?

- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- 🔘 median

56) Assistment #157229 ''157229 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 32 on the box-and-whisker plot of apple pies sold per week?

range
sample minimum
lower quartile
median
upper quartile
sample maximum
inter-quartile range

#### 57) Assistment #157231 ''157231 - 133549 - Box and Whisker - Number to Term''

Steve made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 28 on the box-and-whisker plot of chocolate chip cookies sold per week?

- Iower quartile
- median
- o upper quartile

- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

### 58) Assistment #157183 ''157183 - 133418 - Box and Whisker - Term to Number''

Steve made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.

63	67	71	75	79	83	87	91	95	99
----	----	----	----	----	----	----	----	----	----

From this plot, what is the sample maximum of chocolate bars sold per week?

### 59) Assistment #157194 "157194 - 133418 - Box and Whisker - Term to Number"

John made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.



From this plot, what is the lower quartile of chocolate bars sold per week?

60) Assistment #157261 "157261 - 133549 - Box and Whisker - Number to Term"

Steve made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 32 on the box-and-whisker plot of cups of lemonade sold per week?



## 61) Assistment #157237 ''157237 - 133549 - Box and Whisker - Number to Term''

David made a box-and-whisker plot on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 95 on the box-and-whisker plot of apple pies sold per week?

- o upper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum
- Iower quartile
- 🔘 median

#### 62) Assistment #157197 ''157197 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.

18         26         34         42         50         58         66         74         82	82 90
--	-------

From this plot, what is the upper quartile of cups of lemonade sold per week?

#### 63) Assistment #157262 ''157262 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of chocolate bars that he sold per week in a year.



From this plot, what is the term for the value 50 on the box-and-whisker plot of chocolate bars sold per week?

- Iower quartile
- median
- oupper quartile

- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

## 64) Assistment #157249 "157249 - 133549 - Box and Whisker - Number to Term"

John made a box-and-whisker plot on the number of chocolate chip cookies that he sold per week in a year.

57	61	65	69	73	77	81	85	89	93

From this plot, what is the term for the value 69 on the box-and-whisker plot of chocolate chip cookies sold per week?

- Iower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum

#### 65) Assistment #157202 "157202 - 133418 - Box and Whisker - Term to Number"

Billy made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.



From this plot, what is the upper quartile of cups of lemonade sold per week?

## 66) Assistment #157253 ''157253 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

53 61 69 77 85 93 101 109 117 1	53	61	69	77	85	93	101	109	117	125
---------------------------------	----	----	----	----	----	----	-----	-----	-----	-----

From this plot, what is the term for the value 61 on the box-and-whisker plot of cups of lemonade sold per week?

- sample minimum
- lower quartile
- 🔘 median
- oupper quartile
- sample maximum
- inter-quartile range
- range

## 67) Assistment #157175 ''157175 - 133418 - Box and Whisker - Term to Number''

Steve made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.

57	61	65	69	73	77	81	85	89	93

From this plot, what is the lower quartile of chocolate bars sold per week?

#### 68) Assistment #157267 "157267 - 133549 - Box and Whisker - Number to Term"

Billy made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

48	52	56	60	64	68	72	76	80	84

From this plot, what is the term for the value 16 on the box-and-whisker plot of cups of lemonade sold per week?

- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- median
- o upper quartile
- sample maximum

69) Assistment #157240 "157240 - 133549 - Box and Whisker - Number to Term"

John made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

	24	28	32	36	40	44	48	52	56	60
--	----	----	----	----	----	----	----	----	----	----

From this plot, what is the term for the value 36 on the box-and-whisker plot of cups of lemonade sold per week?

- lower quartile
- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

#### 70) Assistment #157227 ''157227 - 133549 - Box and Whisker - Number to Term''

Billy made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.

23	27	31	35	39	43	47	51	55	59

From this plot, what is the term for the value 35 on the box-and-whisker plot of cups of lemonade sold per week?

- Iower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

#### 71) Assistment #157252 ''157252 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

37 41 45 49 53 57 61 65 69 73

From this plot, what is the term for the value 49 on the box-and-whisker plot of cups of lemonade sold per week?

- Iower quartile
- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

72) Assistment #157260 ''157260 - 133549 - Box and Whisker - Number to Term'' Billy made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

 64
 68
 72
 76
 80
 84
 88
 92
 96
 100

From this plot, what is the term for the value 32 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 range
- sample minimum
- lower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range

## 73) Assistment #157246 ''157246 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value **114** on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- lower quartile
- 🔘 median
- o upper quartile

74) Assistment #157230 ''157230 - 133549 - Box and Whisker - Number to Term''

Billy made a **box-and-whisker plot** on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 85 on the box-and-whisker plot of apple pies sold per week?

Iower quartile

median

- o upper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum

#### 75) Assistment #157180 ''157180 - 133418 - Box and Whisker - Term to Number''

David made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year.

26	30	34	38	42	46	50	54	58	62

From this plot, what is the inter-quartile range of chocolate chip cookies sold per week?

**76**) Assistment #157239 ''157239 - 133549 - Box and Whisker - Number to Term'' John made a **box-and-whisker plot** on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 103 on the box-and-whisker plot of apple pies sold per week?

- oupper quartile
- sample maximum

- inter-quartile range
- range
- sample minimum
- Iower quartile
- 🔘 median

#### 77) Assistment #157184 ''157184 - 133418 - Box and Whisker - Term to Number''

Steve made a box-and-whisker plot of the number of apple pies that he sold per week in a year.

72 76 80 84 88 92 96 100 104	108
------------------------------	-----

From this plot, what is the upper quartile of apple pies sold per week?

#### 78) Assistment #157169 "157169 - 133418 - Box and Whisker - Term to Number"

Steve made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.



## From this plot, what is the inter-quartile range of cups of lemonade sold per week?

## 79) Assistment #157178 ''157178 - 133418 - Box and Whisker - Term to Number''

David made a box-and-whisker plot of the number of apple pies that he sold per week in a year.



From this plot, what is the lower quartile of apple pies sold per week?

## 80) Assistment #157182 ''157182 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.

53 61 69 77 85 93 101 109 117 125

From this plot, what is the median of chocolate bars sold per week?

## 81) Assistment #157221 ''157221 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.

28	32	36	40	44	48	52	56	60	64
	-	00			.0	-		00	0

From this plot, what is the term for the value 40 on the box-and-whisker plot of chocolate chip cookies sold per week?

- lower quartile
- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum

#### 82) Assistment #157223 ''157223 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value **115** on the box-and-whisker plot of chocolate chip cookies sold per week?

- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum
- Iower quartile

## 83) Assistment #157257 ''157257 - 133549 - Box and Whisker - Number to Term''

Billy made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 79 on the box-and-whisker plot of chocolate chip cookies sold per week?

- o upper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- 🔘 median

## 84) Assistment #157218 ''157218 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 64 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 range
- sample minimum

- lower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range

#### 85) Assistment #157238 ''157238 - 133549 - Box and Whisker - Number to Term''

David made a box-and-whisker plot on the number of chocolate chip cookies that he sold per week in a year.

36	40	44	48	52	56	60	64	68	72

From this plot, what is the term for the value 64 on the box-and-whisker plot of chocolate chip cookies sold per week?

- Oupper quartile
- sample maximum
- inter-quartile range
- 🔘 range
- sample minimum
- lower quartile
- 🔘 median

#### 86) Assistment #157216 "157216 - 133418 - Box and Whisker - Term to Number"

Billy made a **box-and-whisker plot** of the number of chocolate bars that he sold per week in a year.



From this plot, what is the sample minimum of chocolate bars sold per week?

## 87) Assistment #157255 ''157255 - 133549 - Box and Whisker - Number to Term''

Steve made a **box-and-whisker plot** on the number of cups of lemonade that he sold per week in a year.

37	41	45	49	53	57	61	65	69	73

From this plot, what is the term for the value 41 on the box-and-whisker plot of cups of lemonade sold per week?

- sample minimum
- Iower quartile
- median
- o upper quartile
- sample maximum
- inter-quartile range
- range

#### 88) Assistment #157235 ''157235 - 133549 - Box and Whisker - Number to Term''

Billy made a **box-and-whisker plot** on the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the term for the value 23 on the box-and-whisker plot of chocolate chip cookies sold per week?

- sample minimum
- Iower quartile
- 🔘 median
- o upper quartile
- sample maximum
- inter-quartile range
- range

89) Assistment #157256 ''157256 - 133549 - Box and Whisker - Number to Term''

Steve made a box-and-whisker plot on the number of chocolate chip cookies that he sold per week in a year.

16   20   24   28   32   36   40   44   48   5	16	20	24	28	32	36	40	44	48	52
--	----	----	----	----	----	----	----	----	----	----

From this plot, what is the term for the value 16 on the box-and-whisker plot of chocolate chip cookies sold per week?

- inter-quartile range
- 🔘 range
- sample minimum
- Iower quartile
- median
- oupper quartile
- sample maximum

## 90) Assistment #157265 ''157265 - 133549 - Box and Whisker - Number to Term''

Billy made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.

20 $34$ $42$ $30$ $36$ $00$ $74$ $62$ $90$ $9$	26	34	42	50	58	66	74	82	90	98
--	----	----	----	----	----	----	----	----	----	----

From this plot, what is the term for the value 64 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 range
- sample minimum
- Iower quartile
- median
- oupper quartile
- sample maximum
- inter-quartile range

#### 91) Assistment #157225 ''157225 - 133549 - Box and Whisker - Number to Term''

John made a **box-and-whisker plot** on the number of apple pies that he sold per week in a year.



From this plot, what is the term for the value 97 on the box-and-whisker plot of apple pies sold per week?

- oupper quartile
- sample maximum
- inter-quartile range
- range
- sample minimum
- Iower quartile
- median

92) Assistment #157212 "157212 - 133418 - Box and Whisker - Term to Number"

Billy made a **box-and-whisker plot** of the number of apple pies that he sold per week in a year.

42 50 58 66 74 82 90 98 106	114
-----------------------------	-----

From this plot, what is the inter-quartile range of apple pies sold per week?

#### 93) Assistment #157224 "157224 - 133549 - Box and Whisker - Number to Term"

David made a box-and-whisker plot on the number of cups of lemonade that he sold per week in a year.



From this plot, what is the term for the value 64 on the box-and-whisker plot of cups of lemonade sold per week?

- 🔘 range
- sample minimum
- Iower quartile
- median
- oupper quartile
- sample maximum
- inter-quartile range

94) Assistment #157200 "157200 - 133418 - Box and Whisker - Term to Number" John made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year. From this plot, what is the upper quartile of chocolate chip cookies sold per week? 95) Assistment #157171 "157171 - 133418 - Box and Whisker - Term to Number" Steve made a box-and-whisker plot of the number of chocolate chip cookies that he sold per week in a year. From this plot, what is the inter-quartile range of chocolate chip cookies sold per week? 96) Assistment #157195 "157195 - 133418 - Box and Whisker - Term to Number" John made a box-and-whisker plot of the number of apple pies that he sold per week in a year. 

From this plot, what is the **range** of apple pies sold per week?

## **97**) Assistment #157211 ''157211 - 133418 - Box and Whisker - Term to Number'' Billy made a **box-and-whisker plot** of the number of cups of lemonade that he sold per week in a year.

47	51	55	59	63	67	71	75	79	83
• /	01	00	57	00	07	/1	10	.,	00

From this plot, what is the inter-quartile range of cups of lemonade sold per week?

## 98) Assistment #157214 ''157214 - 133418 - Box and Whisker - Term to Number''

Billy made a **box-and-whisker plot** of the number of chocolate chip cookies that he sold per week in a year.



From this plot, what is the sample maximum of chocolate chip cookies sold per week?



From this plot, what is the sample maximum of cups of lemonade sold per week?

## Problem Set "Counting Methods - THE SKILL BUILDING SET" id:[15528]

#### 1) Assistment #120292 ''120292 - Calvin is making ...''

Calvin is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make without sausage?

Pizza P	\$6.99 special!	
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Ori <mark>gina</mark> l

## 2) Assistment #119978 ''119978 - Jenny is ordering...''

Jenny is ordering a salad from the menu shown below. If she picks one item from each category, how many different salads can she make with peppers?

Gar	den ens ore	
Lettuce	Vegetable	Dressing
Iceberg	Tomatoes	Vinaigrette
Romaine	Carrots	Ranch
Bibb	Peppers	Caesar
	Onions	

## 3) Assistment #120307 ''120307 - Kaitlin is gettin...''

Kaitlin is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make without a large popcorn?

	Golden Reel Cinema	8
Popcorn	Snacks	Soda
Kiddie Medium Large Jumbo	Candy Bar Pretzel Hot Dog Ice Cream	Orange Soda Root Beer Ginger Ale

## 4) Assistment #120029 ''120029 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with peppers?

Pizza P	\$6.99 special!	
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 5) Assistment #119962 "119962 - How many ways can..."

How many ways can the vases shown below be organized on the shelf if the red vase does not move?



## 6) Assistment #120023 ''120023 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with tomatoes?

Pizza P	\$6.99 special!	
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 7) Assistment #119947 "119947 - Penny is going to..."

Penny is going to flip a coin 4 times. How many outcomes are there in which she gets tails a total of 3 times?

## 8) Assistment #119951 "119951 - Kenny is going to..."

Kenny is going to flip a coin 4 times. How many outcomes are there in which he gets heads a total of 0 times?

## 9) Assistment #120000 ''120000 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with ham?

Pizza P	\$6.99 special!	
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 10) Assistment #119917 "119917 - Blair is making a..."

Blair is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make without pepperoni?

Pizza P	\$6.99 special!	
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 11) Assistment #120022 "120022 - Patty is making a..."

Patty is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make with mushrooms?

Pizza P	i's Pizzeria	\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 12) Assistment #120407 ''120407 - Nancy is getting ...''

Nancy is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make with an ice cream?

## Problem Set "Range - THE SKILL BUILDING SET" id:[8979]

## 1) Assistment #58435 ''58435 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 121?

52, 67, 27, 73, 24, 107, 84

85202

0 145

0 158

2) Assistment #58437 ''58437 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 129?

41, 55, 39, 67, 5, 101, 78 79 191 134 161

**3**) Assistment #58386 ''58386 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.67, 54.67, 32, 106, 6, 35, 143

## 4) Assistment #58442 ''58442 - 30370 - range-table-female''

The coach for the lacross Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Shaun	10, 6, 17, 14, 25, 18, 8, 4, 23, 10
Julia	16, 19, 6, 9, 9, 2, 15, 30, 13, 11

What is the **range** number of points scored by Julia?

) Assistment #58475 ''58475 - 57508 - Range, with Context, 8'' Rachel's scores in 8 math tests are shown below. What is the range of Rachel's scores?		
	26, 31, 23, 29, 16, 24, 40, 48	
6) Assistment	#58251 ''58251 - Range''	
Calculate the	e range of the following numbers:	
	52, 43, 3, 124, 78, 137	
	52, 34, 9, 106, 84, 139, 106	
8) Assistment What numbe	<b>#58420 ''58420 - 57507 - Range, Missing number, 10''</b> er should be added to the following list to get a range of 122?	
	50, 53, 65, 38, 88, 120, 99, 131, 146	
19		
23		
24		
31		

## 9) Assistment #58443 ''58443 - 30370 - range-table-female''

The coach for the ping-pong Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	16, 10, 19, 17, 20, 18, 13, 3, 26, 8
Amanda	18, 22, 5, 10, 12, 2, 21, 30, 16, 16

## What is the **range** number of points scored by Amanda?



#### 10) Assistment #58466 ''58466 - 57511 - Range, with Context, 6''

The All-USA Physics team coach needs to pick one of two people for the All-USA Physics team. Points obtained by Gary and Ross are given below.

What is the range of points obtained by Ross?

Gary	15, 8, 18, 18, 16, 18
Ross	25, 20, 14, 23, 15, 29

**11)** Assistment #58378 ''58378 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.33, 31.67, 27, 114, 4, 31, 133

12) Assistment #58488 ''58488 - 57509 - Range, with Context, 5'' Beth's scores in 5 history tests are shown below. What is the range of Beth's scores?

33, 20, 16, 52, 25

13) Assistment #58247 "58247 - Range"

Calculate the **range** of the following numbers:

54, 47, 12, 106, 91, 127

14) Assistment #58474 ''58474 - 57508 - Range, with Context, 8'' Beth's scores in 8 math tests are shown below. What is the range of Beth's scores?

27, 32, 24, 26, 11, 30, 37, 48



## 15) Assistment #58458 ''58458 - 57510 - Range, with Context, 7''

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Ross are given below.

What is the range of points obtained by Joe?

Joe	23, 28, 20, 12, 21, 19, 31
Ross	15, 9, 15, 19, 26, 16, 22

**16)** Assistment #58369 ''58369 - 27424 - Find the Range'' Calculate the **range** of the following numbers:

54, 30, 14, 112, 93, 147, 112

17) Assistment #58250 ''58250 - Range''

Calculate the **range** of the following numbers:

67, 37, 17, 118, 86, 137

## 18) Assistment #58399 "58399 - What number shoul..."

What number should be added to the following list to get a range of 128?

69, 46, 8, 124, 97

123137

0 136

0 151

#### 19) Assistment #58403 "58403 - What number shoul..."

What number should be added to the following list to get a range of 113?

59, 34, 15, 119, 77

0 118

0 129

- 128
- 0 140

## Problem Set "Angles - Obtuse, Acute and Right Angles - THE SKILL BUILDING SET" id:[9245]

## 1) Assistment #75194 ''75194 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?



2) Assistment #75184 ''75184 - 61814 - Obtuse angles'' Identify the type of the colored angle in the following figure?



## 3) Assistment #75202 ''75202 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?

1.



## 4) Assistment #75167 ''75167 - 61813 - Right angles'' Identify the type of the colored angle in the following figure?



5) Assistment #75163 ''75163 - 61813 - Right angles'' Identify the type of the colored angle in the following figure?

- Acute Angle
- Obtuse Angle
- Right Angle

## 6) Assistment #75212 ''75212 - 61817 - 61816 - 61815 - select right''

Which of the following colored angles represents a right angle?



7) Assistment #75237 ''75237 - 61812 - Acute angles''

Identify the type of the colored angle in the following figure?



O Acute angle

- Right angle
- Obtuse angle

## 8) Assistment #75206 ''75206 - 61816 - 61815 - select obtuse''

Which of the following colored angles represents an obtuse angle?



## 9) Assistment #75149 ''75149 - 61815 - select acute'' Which of the following colored angles represents an acute angle?



ASSISTMENTS.ORG

# Looking for Pythagoras

## Appendix of Student Work

Cristina Heffernan, Alexandra Birch, Quinten Palmer, and Jeffrey Namias Academic Year 2011 – 2012

This is a document of the Pretest, Posttest, Mid test, and all of the relevant and irrelevant skill builders used in the CMP Study. Academic Year 2011 – 2012.

## Problem Set "Pretest of Looking for Pythagoras from WPI" id:[38531]

## 1) Assistment #34880 "34880 - Looking for Pythagoras Investigation 1 #1-Morph2"

The position of two houses (A and B) are shown on a coordinate plane below. If you were able to walk between the location of house A and house B in a direct line, what would be the halfway point (or midpoint) of the houses?



- (-2, 3)
- (1, 0)
- $\bigcirc$  (0, 0)
- 0 (3, -2)

## 2) Assistment #36384 "36384 - Looking for Pythagoras Investigation 1 #2-Morph2"

If you draw a line from A to G, as shown below, which statement is true about the distance **d**? Assume a unit is the length of the side of a square on the grid.



- $\bigcirc$  A. d > 4 units
- $\bigcirc$  B. d < 4 units
- $\bigcirc$  C. d = 4 units

## 3) Assistment #36386 ''36386 - Looking for Pythagoras Investigation 1 #3-Morph2''

Suppose you want to place two points C and D on the graph in order to create a *non-rectangular* parallelogram ABCD. Which of the following locations for point C and point D would create a non-rectangular parallelogram?



- A) C(1,-2); D(1,3)
- B) C(1,-3); D(1,2)
- ◎ C) C(1,-2); D(1,1)

## 4) Assistment #36388 ''36388 - Looking for Pythagoras Investigation 1 #4-Morph2''

What is the area of the triangle shown below? (Assume the distance between each dot represents 1 unit. Enter your answer as a whole number without any units or labels)



5) Assistment #36392 ''36392 - Looking for Pythagoras Investigation 1 #5-Morph2''

Find the area of the figure shown. (*Note: The horizontal and vertical distance between each dot is 1 unit*)



## 6) Assistment #43009 "43009 - Looking for Pythagoras Investigation 2 #1-Morph2"

The figure below shows one side of a square, line segment AB. What is the area of the square?



7) Assistment #36605 ''36605 - Looking for Pythagoras Investigation 2 #2-Morph2'' What is the largest whole number less than  $\sqrt{39}$ ?

8) Assistment #36607 ''36607 - Looking for Pythagoras Investigation 2 #3-Morph2'' What is the smallest whole number greater than  $\sqrt{27?}$ 

9) Assistment #43012 "43012 - Looking for Pythagoras Investigation 2 #4-Morph2"
How long is the line segment AB?



10) Assistment #36654 ''36654 - Looking for Pythagoras Investigation 2 #5-Morph2''

Which of the following answer choices shows the numbers in order from *least to greatest*?

A. -√33, -6, 4.9, √28, √37, 7.2
B. 7.2, √37, √28, 4.9, -√33, -6
C. -6, -√33, 4.9, √28, √37, 7.2
D. -√33, -6, 4.9, 7.2, √28, √37

11) Assistment #42272 ''42272 - Looking for Pythagoras Investigation 3 #1 - Morph2''

What is the length of the hypotenuse of the right triangle shown below?



12) Assistment #43059 ''43059 - Looking for Pythagoras Investigation 3 #2-Morph2'' Which two points have a distance between them of  $\sqrt{32?}$ 



- A and B
- $\bigcirc\,\,B$  and C
- C and D
- $\bigcirc\,$  D and E

**13**) Assistment #42907 "42907 - Looking for Pythagoras Investigation 3 #3 - Morph2" Which set of lengths would make a right triangle?

- A. 2, 4, 6
- OB. 3, 6, 9
- O C. 5, 12, 13
- O. 1, 2, 3

14) Assistment #42960 ''42960 - Looking for Pythagoras Investigation 3 #4-Morph2''

http://assistments.org/build/print/sequence/38531?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

Use the Pythagorean Theorem to find the distance between point A and point B. (Note: The horizontal and vertical distance between each dot is 1 unit)



- $\bigcirc$   $\sqrt{18}$  units
- Ø 4 units
- 6 units
- $\bigcirc$   $\sqrt{12}$  units

#### 15) Assistment #42962 ''42962 - Looking for Pythagoras Investigation 4 #1-Morph2''

A right isoceles triangle has a hypotenuse of 20 feet. What are the lengths of the legs of the triangle?

- $\bigcirc$   $\sqrt{10}$  feet
- 40 feet
- 5 feet
- $\bigcirc$   $\sqrt{200}$  feet

#### 16) Assistment #43198 ''43198 - Looking for Pythagoras Investigation 4 #2-Morph2''

Mr. Erickson's daily commute (from point A to D) to work is normally 16 miles. Due to an accident he must take an alternative route (A to B to C to D). How far will Mr. Erickson's alternative commute be due to the accident?



# **17**) Assistment #209167 "209167 - 208521 - Point E coordinates" What are the coordinates of Point E? Use the form (x,y)

# 18) Assistment #92112 "92112 - Area of Trapezoid"



#### 19) Assistment #39117 "39117 - Ordering Fractions"

Fill in the **blank** to make the statement true.



0 >

0 <

0 =

#### 20) Assistment #34022 "34022 - Ordering Integers "

From the following integers, which integer is the largest?

-4, 3, 8, -9

**21**) Assistment #200792 ''200792 - 196885 - Parallel and Perpendicular Lines - Points'' One line passes through the points (4,6) and (6,6).

Another line passes through the points (5,3) and (7,3).

Are these lines parallel, perpendicular, the same line, or none of these answers?

- Parallel
- Perpendicular
- They are the same line
- None of the above

#### Problem Set "Midtest of Looking for Pythagoras from WPI" id:[38532]

1) Assistment #209169 "209169 - 208521 - Point E coordinates" What are the coordinates of Point E? Use the form (x,y)



#### 2) Assistment #92114 "92114 - Area of Trapezoid"

What is the area of the trapezoid with the given information?

2 6 9

image not to scale

#### 3) Assistment #39120 "39120 - Ordering Fractions"

Fill in the **blank** to make the statement true.

$$\frac{1}{6} - \frac{2}{18}$$

) >

0 <

) =

#### 4) Assistment #34030 "34030 - Ordering Integers "

From the following integers, which integer is the largest?

-2, 4, 6, -9

5) Assistment #200793 "200793 - 196885 - Parallel and Perpendicular Lines - Points" One line passes through the points (6,2) and (8,-2).

Another line passes through the points (7,3) and (9,-1).

Are these lines parallel, perpendicular, the same line, or none of these answers?

Parallel

- Perpendicular
- They are the same line
- None of the above

# Problem Set "Posttest of Looking for Pythagoras from WPI" id:[38533]

## 1) Assistment #34880 "34880 - Looking for Pythagoras Investigation 1 #1-Morph2"

The position of two houses (A and B) are shown on a coordinate plane below. If you were able to walk between the location of house A and house B in a direct line, what would be the halfway point (or midpoint) of the houses?



- (-2, 3)
- (1, 0)
- 0,0)
- 0 (3, -2)

### 2) Assistment #36384 "36384 - Looking for Pythagoras Investigation 1 #2-Morph2"

If you draw a line from A to G, as shown below, which statement is true about the distance **d**? Assume a unit is the length of the side of a square on the grid.



- $\bigcirc$  A. d > 4 units
- $\bigcirc$  B. d < 4 units
- $\bigcirc$  C. d = 4 units

# 3) Assistment #36386 ''36386 - Looking for Pythagoras Investigation 1 #3-Morph2''

Suppose you want to place two points C and D on the graph in order to create a *non-rectangular* parallelogram ABCD. Which of the following locations for point C and point D would create a non-rectangular parallelogram?



- A) C(1,-2); D(1,3)
- B) C(1,-3); D(1,2)
- ◎ C) C(1,-2); D(1,1)

# 4) Assistment #36388 ''36388 - Looking for Pythagoras Investigation 1 #4-Morph2''

What is the area of the triangle shown below? (Assume the distance between each dot represents 1 unit. Enter your answer as a whole number without any units or labels)



5) Assistment #36392 ''36392 - Looking for Pythagoras Investigation 1 #5-Morph2''

Find the area of the figure shown. (Note: The horizontal and vertical distance between each dot is 1 unit)



# 6) Assistment #43009 "43009 - Looking for Pythagoras Investigation 2 #1-Morph2"

The figure below shows one side of a square, line segment AB. What is the area of the square?



7) Assistment #36605 ''36605 - Looking for Pythagoras Investigation 2 #2-Morph2'' What is the largest whole number less than  $\sqrt{39}$ ?

8) Assistment #36607 ''36607 - Looking for Pythagoras Investigation 2 #3-Morph2'' What is the smallest whole number greater than  $\sqrt{27?}$ 

9) Assistment #43012 "43012 - Looking for Pythagoras Investigation 2 #4-Morph2"

How long is the line segment AB?



10) Assistment #36654 ''36654 - Looking for Pythagoras Investigation 2 #5-Morph2''

Which of the following answer choices shows the numbers in order from *least to greatest*?

A. -√33, -6, 4.9, √28, √37, 7.2
B. 7.2, √37, √28, 4.9, -√33, -6
C. -6, -√33, 4.9, √28, √37, 7.2
D. -√33, -6, 4.9, 7.2, √28, √37

11) Assistment #42272 ''42272 - Looking for Pythagoras Investigation 3 #1 - Morph2''

What is the length of the hypotenuse of the right triangle shown below?



12) Assistment #43059 ''43059 - Looking for Pythagoras Investigation 3 #2-Morph2'' Which two points have a distance between them of  $\sqrt{32?}$ 



- A and B
- $\bigcirc\,\,B$  and C
- C and D
- $\bigcirc\,$  D and E

**13**) Assistment #42907 "42907 - Looking for Pythagoras Investigation 3 #3 - Morph2" Which set of lengths would make a right triangle?

- A. 2, 4, 6
- OB. 3, 6, 9
- O C. 5, 12, 13
- O. 1, 2, 3

14) Assistment #42960 ''42960 - Looking for Pythagoras Investigation 3 #4-Morph2''

Use the Pythagorean Theorem to find the distance between point A and point B. (Note: The horizontal and vertical distance between each dot is 1 unit)



- $\bigcirc$   $\sqrt{18}$  units
- Ø 4 units
- 6 units
- $\bigcirc$   $\sqrt{12}$  units

#### 15) Assistment #42962 ''42962 - Looking for Pythagoras Investigation 4 #1-Morph2''

A right isoceles triangle has a hypotenuse of 20 feet. What are the lengths of the legs of the triangle?

- $\bigcirc$   $\sqrt{10}$  feet
- 40 feet
- 5 feet
- $\bigcirc$   $\sqrt{200}$  feet

#### 16) Assistment #43198 ''43198 - Looking for Pythagoras Investigation 4 #2-Morph2''

Mr. Erickson's daily commute (from point A to D) to work is normally 16 miles. Due to an accident he must take an alternative route (A to B to C to D). How far will Mr. Erickson's alternative commute be due to the accident?



# **17**) Assistment #209174 "209174 - 208521 - Point E coordinates" What are the coordinates of Point E? Use the form (x,y)

# 18) Assistment #92115 ''92115 - Area of Trapezoid''

What is the area of the trapezoid with the given information? 2 14 8 image not to scale

**19**) Assistment #39183 ''39183 - Fill in the blank...'' Fill in the blank to make the statement true.



http://assistments.org/build/print/sequence/38533?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

0 >

◎ <

) =

#### 20) Assistment #34031 "34031 - Ordering Integers "

From the following integers, which integer is the largest?

-2, 3, 7, -8

**21**) Assistment #200794 ''200794 - 196885 - Parallel and Perpendicular Lines - Points'' One line passes through the points (2,4) and (4,8).

Another line passes through the points (3,3) and (5,7).

Are these lines parallel, perpendicular, the same line, or none of these answers?

Parallel

- Perpendicular
- They are the same line
- None of the above

#### Problem Set "Point Plotting - THE SKILL BUILDING SET" id:[35008]

1) Assistment #209218 ''209218 - 208507 - Plot the point''

Danielle has to plot 5 points for homework. Which is the point with the coordinates (-4,4)?

A
 B
 C
 D
 E

**2)** Assistment #209223 "209223 - 208507 - Plot the point" Beth has to plot 5 points for homework. Which is the point with the coordinates (-4,4)?

A

- 🔘 B
- 🔘 C
- 🔘 D
- 🔘 E

**3**) Assistment #209233 ''209233 - 208518 - Point B coordinates'' What are the coordinates of Point B? Use the form (x,y)



**4)** Assistment #209213 ''209213 - 206263 - Plot the point'' Mary has to plot 5 points for homework. Which is the point with the coordinates (-4,0)? A
 B
 C
 D
 E

5) Assistment #209248 "209248 - 208519 - Point C coordinates" What are the coordinates of Point C? Use the form (x,y)



6) Assistment #209209 ''209209 - 206263 - Plot the point'' Karen:Kate has to plot 5 points for homework. Which is the point with the coordinates (-6,3)? A
 B
 C

🔘 D

🔘 E

7) Assistment #209230 ''209230 - 208518 - Point B coordinates''

What are the coordinates of Point B? Use the form (x,y)

8) Assistment #209234 ''209234 - 208518 - Point B coordinates'' What are the coordinates of Point B? Use the form (x,y)

### Problem Set "Area Trapezoid - THE SKILL BUILDING SET" id:[10765]

## 1) Assistment #92201 ''92201 - Area of Trapezoid''

What is the area of the trapezoid with the given information?



image not to scale

#### 3) Assistment #92194 ''92194 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

6

12

image not to scale

#### 4) Assistment #92191 ''92191 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

	6
13	
	10
image not to scale	e

#### 5) Assistment #92186 "92186 - Area of Trapezoid"

What is the area of the trapezoid with the given information?



# 6) Assistment #92144 ''92144 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

4 8 5.5 7

image not to scale 7) Assistment #92132 "92132 - 75488 - Height from Area of Trapezoid" What is the height of the trapezoid with area of 31.5 and the given information? 1 8 image not to scale 8) Assistment #92155 "92155 - Area of Trapezoid" What is the area of the trapezoid with the given information? 4 6 10 image not to scale 9) Assistment #92126 "92126 - Area of Trapezoid" What is the area of the trapezoid with the given information? 5 7

10

image not to scale

## 10) Assistment #92176 ''92176 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

15			
	15	15	15

# 11) Assistment #92172 ''92172 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

6			
	11		
7			
1			
image not to scale			

#### 12) Assistment #92149 ''92149 - Area of Trapezoid''

What is the area of the trapezoid with the given information?

Problem Set "Ordering Fractions: using <,>, =" id:[6038]

1) Assistment #39395 "39395 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



2) Assistment #39195 "39195 - Fill in the blank..." Fill in the blank to make the statement true.



#### 3) Assistment #39390 "39390 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



http://assistments.org/build/print/sequence/6038?mode=test&op\_scaf=false&op\_hint=false... 4/7/2012

 </l

#### 4) Assistment #39361 ''39361 - Ordering Fractions''

What should  $\Box$  be to make the following statement true?



5) Assistment #39282 "39282 - Fill in the blank..." Fill in the blank to make the statement true.



#### 6) Assistment #39388 "39388 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



7) Assistment #39371 "39371 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



8) Assistment #39309 "39309 - Fill in the blank..." Fill in the blank to make the statement true.



9) Assistment #39278 ''39278 - Fill in the blank...''

Fill in the **blank** to make the statement true.



10) Assistment #39357 "39357 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



11) Assistment #39358 "39358 - Ordering Fractions"

What should  $\Box$  be to make the following statement true?



**12**) Assistment #39311 "39311 - Fill in the blank..." Fill in the blank to make the statement true.

Problem Set "Ordering Integers" id:[5956]

1) Assistment #34019 "34019 - Ordering Integers "

From the following integers, which integer is the largest?

-5, 1, 6, -10

2) Assistment #34040 "34040 - Ordering Integers "

From the following integers, which integer is the largest?

-2, 1, 9, -7

3) Assistment #34088 "34088 - Ordering Integers "

From the following integers, which integer is the smallest?

-5, 2, 7, -9

4) Assistment #34052 "34052 - Ordering Integers "

The table below shows the low temperatures of four cities one winter night.

City	Temperature
Cambridge	-6
Leominster	29
Shrewsbury	-11
Stoneham	14

Which city had the lowest temperature that night?

Cambridge

Certain Leominster

Shrewsbury

Stoneham

#### 5) Assistment #34100 "34100 - Ordering Integers"

From the following integers, which integer is the smallest?

-9, -3, 4, 8, -5, 9

6) Assistment #34036 "34036 - Ordering Integers "

From the following integers, which integer is the largest?

-2, 4, 9, -9

7) Assistment #34029 "34029 - Ordering Integers "

From the following integers, which integer is the largest?

-4, 3, 7, -7

8) Assistment #34080 "34080 - Ordering Integers "

From the following integers, which integer is the smallest?

-3, 3, 7, -7

9) Assistment #34055 "34055 - Ordering Integers "

The table below shows the low temperatures of four cities one winter night.

City	Temperature
Worcester	-1
Leominster	5
Holden	-18
Malden	15

Which city had the lowest temperature that night?

- Worcester
- Certain Leominster
- O Holden
- Malden

#### 10) Assistment #34071 "34071 - Ordering Integers "

The table below shows the low temperatures of four cities one winter night.

City Temperature Boston -4 Paxton 4 Spencer -13

Charlton 1

Which city had the lowest temperature that night?

- O Boston
- Paxton
- Spencer
- Charlton

#### 11) Assistment #34043 "34043 - Ordering Integers "

From the following integers, which integer is the largest?

-2, 4, 6, -7

12) Assistment #34018 "34018 - Ordering Integers "

From the following integers, which integer is the largest?

-4, 2, 8, -10

13) Assistment #34038 "34038 - Ordering Integers "

From the following integers, which integer is the largest?

-3, 3, 7, -10

#### 14) Assistment #34050 "34050 - Ordering Integers "

The table below shows the low temperatures of four cities one winter night.

City	Temperature
Cambridge	-6
Leominster	4
Spencer	-19
Malden	1

Which city had the lowest temperature that night?

- Cambridge
- Leominster
- Spencer
- Malden

#### 15) Assistment #34026 "34026 - Ordering Integers "

From the following integers, which integer is the largest?

-3, 3, 9, -9

16) Assistment #34097 "34097 - Ordering Integers"

From the following integers, which integer is the smallest?

-4, -7, 2, 9

17) Assistment #34074 "34074 - Ordering Integers "

The table below shows the low temperatures of four cities one winter night.

City	Temperature
Boston	-5
Leominster	5
Sterling	-10

#### Problem Set "Parallel and Perpendicular Lines - THE SKILL BUILDING SET" id:[33910]

1) Assistment #200844 ''200844 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines '' Are these two lines parallel, perpendicular, the same line or none of the above?

y = 8x + 15

- y = (-1/8)x + 2
- Parallel
- Perpendicular
- They are the same line
- None of the above

2) Assistment #200803 ''200803 - 196885 - Parallel and Perpendicular Lines - Points'' One line passes through the points (4,6) and (6,6).

Another line passes through the points (5,3) and (7,3).

Are these lines parallel, perpendicular, the same line, or none of these answers?

- Parallel
- Perpendicular
- They are the same line
- None of the above

**3**) Assistment #200816 "200816 - 196895 - 196885 - Parallel and Perpendicular Lines - Points" One line passes through the points (1,0) and (3,0).

Another line passes through the points (-1,-3) and (-1,-1).

Are these lines parallel, perpendicular, the same line, or none of these?

- Parallel
- Perpendicular
- They are the same line
- None of the above

4) Assistment #200890 ''200890 - 197251 - Parallel and Perpendicular Lines'' Find the equation of a line that is parallel to y = 5x + 10 and passes through the point (-9, -9).

Use x as the independant variable and y at the dependant variable. To answer the question, fill in the blank:

y = \_\_\_\_

5) Assistment #200868 ''200868 - 197094 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines''

```
Are these two lines parallel, perpendicular, the same line, or none of these? 32x + 4y = 12
64x + 8y = 112
```

- Parallel
- Perpendicular
- They are the same line
- None of the above

6) Assistment #200925 ''200925 - 198797 - 196885 - Parallel and Perpendicular Lines - Points'' One line passes through the points (5,8.5) and (6,9).

Another line passes through the points (13, 12.5) and (14, 13).

Are these lines parallel, perpendicular, the same line, or none of these answers?

- Parallel
- Perpendicular
- They are the same line
- None of the above

7) Assistment #200845 ''200845 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines ''

Are these two lines parallel, perpendicular, the same line or none of the above?

- y = 4x + 9
- y = (-1/4)x + 3
- Parallel
- Perpendicular
- They are the same line
- None of the above

#### 8) Assistment #200884 "200884 - 197251 - Parallel and Perpendicular Lines"

Find the equation of a line that is parallel to y = 2x + 7 and passes through the point (-1, 1).

Use x as the independant variable and y at the dependant variable. To answer the question, fill in the blank:

y = \_\_\_\_\_

9) Assistment #200853 ''200853 - 197094 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines'' Are these two lines parallel, perpendicular, the same line, or none of these?

32x + 4y = 12

- 64x + 8y = 144
- Parallel
- Perpendicular

- They are the same line
- None of the above

```
10) Assistment #200852 ''200852 - 197094 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines''
Are these two lines parallel, perpendicular, the same line, or none of these?
12x + 2y = 4
36x + 6y = 72

Parallel
```

- Perpendicular
- They are the same line
- None of the above

11) Assistment #200936 ''200936 - 198797 - 196885 - Parallel and Perpendicular Lines - Points''

One line passes through the points (3,6) and (4,8).

Another line passes through the points (11,22) and (12,24).

Are these lines parallel, perpendicular, the same line, or none of these answers?

- Parallel
- Perpendicular
- They are the same line
- None of the above

12) Assistment #200854 "200854 - 197094 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines" Are these two lines parallel, perpendicular, the same line, or none of these?
36x + 3y = 3 144x + 12y = 60
Parallel

- Perpendicular
- They are the same line
- None of the above

#### 13) Assistment #200913 ''200913 - 198315 - Parallel and Perpendicular Lines''

Are these two lines parallel, perpendicular, the same line, or none of the above? 12x + 6y = 1236x + 18y = 36

- Parallel
- Perpendicular
- The same line
- None of the above

14) Assistment #200871 ''200871 - 197094 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines''

Are these two lines parallel, perpendicular, the same line, or none of these?

12x + 2y = 8

- 36x + 6y = 60
- Parallel
- Perpendicular
- They are the same line
- None of the above

15) Assistment #200910 "200910 - 197542 - 197251 - Parallel and Perpendicular Lines" Find the equation of a line that is perpendicular to y = (1/2)x + 3 and passes through the point (8, -8).

Use x for the independant variable and y for the dependant variable. Type the answer by filling in the blank



#### 16) Assistment #200909 ''200909 - 197542 - 197251 - Parallel and Perpendicular Lines''

Find the equation of a line that is perpendicular to y = (1/2)x + 1and passes through the point (4, -12).

Use x for the independant variable and y for the dependant variable. Type the answer by filling in the blank

y = \_\_\_\_\_

17) Assistment #200921 "200921 - 198315 - Parallel and Perpendicular Lines" Are these two lines parallel, perpendicular, the same line, or none of the above? 20x + 10y = 10120x + 60y = 60

- Parallel
- Perpendicular
- The same line
- None of the above

18) Assistment #200851 ''200851 - 197090 - 196895 - 196885 - Parallel and Perpendicular Lines ''

Are these two lines parallel, perpendicular, the same line or none of the above?

y = 2x + 11

y = (-1/2)x + 14

- Parallel
- Perpendicular
- They are the same line
- None of the above

#### Problem Set "Mean - LEVEL 1 SKILL BUILDING" id:[17470]

1) Assistment #126435 ''126435 - 57305 - Mean of Integer and Decimals,6'' Calculate the mean of the following numbers:

1.03, 2, 2, 0.97, 2, 2.34

(round to the nearest hundredths place)

2) Assistment #126508 ''126508 - 56648 - Mean with Context and Vertical Table''

Matt runs a shoe store, and listed below are the store sales for the year 1997. What were the average monthly sales in 1997?

Month	Sales (\$)
January	1006
February	1044
March	2504
April	1119
May	1503
June	601
July	1003
August	2203
September	1011
October	1634
November	1921
December	2050

(round to hundredths place)

3) Assistment #126464 ''126464 - Mean''

Calculate the **mean** of the following numbers:

17, 13, 6, 10, 18, 15

(round to the nearest tenths place)

4) Assistment #126467 "126467 - 57312 - Mean with Context, 5"
Jamie works at the local clothes store and has to process all the sales at the end of the day. The list below gives the dollar amounts of all the sales made on a particular day.

What is the average amount of these sales?

29, 18, 8, 13.86, 4

(round to the nearest hundredths place)

5) Assistment #126428 ''126428 - 125362 - Mean with Context and Table 2''

The coach for the All-USA Math Team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 10 tests.

Name of player	Number of points scored
Chris	8,11,14,13,18,23,12,3,30,14
Liz	20,22,6,13,7,2,17,27,19,13

What is the mean (average) number of points obtained by Liz ?

6) Assistment #126420 "126420 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	9,5,17,14,23,15,6,4,28,6
Amanda	23,20,5,16,7,8,22,29,14,10

What is the mean (average)number of points scored by Daniel ?

7) Assistment #126450 "126450 - Mean - Smaller Numbers"

Calculate the **mean** of the following numbers:

9, 10, 2, 4, 8, 9

(round to the nearest hundredths place)

#### 8) Assistment #126417 "126417 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Eric	9,5,16,20,19,23,10,6,24,7
Alexa	17,26,6,13,10,9,15,30,20,15

What is the mean (average)number of points scored by Eric ?

9) Assistment #126496 "126496 - 56554 - Mean of Integer and Decimals" Calculate the mean of the following numbers:

1.35, 3, 8, 1.09, 6, 2.63, 5

(round to the nearest hundredths place)

### 10) Assistment #126516 ''126516 - 125360 - Mean with Context and Table 1, 8''

The coach for the Drama Team Competition needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 8 games.

Name of player	Number of points scored
Eric	10,6,9,12,26,21,13,6
Alexa	23,22,2,16,12,7,19,28

What is the **mean** (average) number of points scored by Eric ? (Round to the hundredths place)

11) Assistment #126509 ''126509 - 125327 - Mean with Context, 11''

During a medical study, doctors recorded the weights in pounds of all their volunteers. Some of the weights are given here. What is the average weight of the volunteers listed below? 147, 160, 103, 137, 127, 151, 118, 149, 151, 109, 135

(round to the nearest hundredths place)

#### 12) Assistment #126483 ''126483 - 56565 - Mean with Context''

Nancy obtained the following scores in 5 math tests. Calculate the mean of Nancy's math scores:

189, 126, 88, 124, 47

(round to the nearest hundredths place)

**13**) Assistment #126413 "126413 - 57304 - Mean of Integer and Decimals,9" Calculate the mean of the following numbers:

1.67, 1, 9, 1.56, 5, 3.14, 14, 3.65, 10

(round to the nearest hundredths place)

**14**) Assistment #126424 ''126424 - 56562 - Mean of Integers'' Calculate the mean of the following numbers:

38, 111, 54, 53, 69

(round to the nearest hundredths place)

15) Assistment #126418 "126418 - mean table"

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Ricky	13,6,15,19,24,21,12,6,30,13
Carol	19,22,5,16,12,9,22,27,15,15

What is the mean (average)number of points scored by Ricky ?

16) Assistment #126491 ''126491 - 125271 - Mean of Decimals,11''

Calculate the **mean** of the following numbers:

#### Problem Set "Median - THE SKILL BUILDING SET" id:[21943]

1) Assistment #137385 ''137385 - Median - Find Missing Data Points - Even'' What number should be added to the list below to get a median of 18?

10, 21, 9, 15, 28

11301

0 10

#### 2) Assistment #137491 ''137491 - 30369 - median table''

The coach for the All-Star Basketball Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 11 games.

Name of player	Number of points scored on the last eleven games
John	40,67,27,80,16,75,57,4,72,24,48
Cristina	22,26,8,11,54,6,9,22,23,18,11

What is the median number of points scored by John?

3) Assistment #137387 "137387 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19?

13, 23, 8, 15, 26

9 🔘

0 14

0 30

04

#### 4) Assistment #137359 "137359 - 56718 - Median with Context and Table and Even values"

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games	
John	11,8,14,6,1,20,22,12	
Cristina	20,8,27,6,24,22,12,15	

What is the median of number of points obtained by Cristina?

5) Assistment #137313 "137313 - 132165 - Median - Find Missing Data Points - Even, 8" What number should be added to the list below to get a **median** of 25.115?

12, 28.23, 35, 19, 61, 8.63, 48

1322

9.63

5.63

#### 6) Assistment #137483 "137483 - 56714 - Median - Find Missing Data Points - Odd, with context"

Mary obtained the following scores in 4 of 5 math tests. If the **median** of Mary's math scores was 21, what was Mary's math score on the fifth test?

14, 26.87, 21, 6 7 15 24 3

#### 7) Assistment #137488 ''137488 - 56714 - Median - Find Missing Data Points - Odd, with context''

John obtained the following scores in 4 of 5 math tests. If the **median** of John's math scores was 17, what was John's math score on the fifth test?

	12,	26.87,	17,	7
8				
13				
26				
<b>0</b> 4				

### 8) Assistment #137357 ''137357 - 56718 - Median with Context and Table and Even values''

The coach for the All-USA Physics team needs to pick one of two students for the team. The table below shows the number of points each of the students obtained in their last 8 tests.

Name of player	Number of points scored on the last ten games
John	6,8,9,9,8,21,26,20

Cristina 18,8,27,4,24,22,12,15

What is the median of number of points obtained by Cristina ?

9) Assistment #137379 "137379 - 56707 - Median: Odd Number of Values, Mix of Decimals and Integers" Below is a list of numbers.

[1.33, 3.85, 1.65, 2.11, 1.12, 4.51, 2.33, 2.69, 3.91]

What is the **median** number in this list?

**10**) Assistment #137402 ''137402 - Median - Find Missing Data Points - Odd'' What number should be added to the list below to get a **median** of 18?

- 11, 23, 5, 18
- 25
  17
  6

02

## 11) Assistment #137386 "137386 - Median - Find Missing Data Points - Even"

What number should be added to the list below to get a **median** of 19.5?

- 14, 22, 9, 17, 25
- 0 10

15

0 33

6 4

12) Assistment #137466 ''137466 - 56719 - Median with Context and Vertical Table''

Liz runs a grocery store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)
January	1125
February	2506
March	1922
April	607
May	1044
June	901

July	1507
August	1631
September	1006
October	1021
November	2203
December	2054

### 13) Assistment #137472 "137472 - 56719 - Median with Context and Vertical Table"

Ashley runs a shoe store, and listed below are the store sales for the year 1997. What was the median of the monthly sales in 1997?

Month	Sales (\$)
January	1126
February	2504
March	1924
April	601
May	1045
June	903
July	1501
August	1636
September	1002
October	1024
November	2201
December	2050

## 14) Assistment #137336 "137336 - 56717 - Median with Context and Table and Odd values"

The coach for the School Tennis Team needs to pick one of two players for the team. The table below shows the number of points each of the players scored in their last 7 games.

Name of player	Number of points scored on the last ten games
Brian	20,8,15,5,23,22,13
Camille	12,10,12,7,9,23,24

## What is the **median** of number of points scored by Brian ?

http://assistments.org/build/print/sequence/21943?mode=test&op\_scaf=false&op\_hint=fals... 3/28/2012

#### Problem Set "Elapsed Time - LEVEL 2 SKILL BUILDING" id:[37824]

#### 1) Assistment #234450 ''234450 - Elapsed Time 3''

When Mary last checked the clock it was 6:51 pm. It is now 10:25 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

2) Assistment #234432 ''234432 - Elapsed Time 2''

When Mary last checked the clock it was 1:47 pm. It is now 3:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 3) Assistment #234394 "234394 - 215936 - Elapsed Time 1"

When Mark last checked his watch it was 1:00 pm. It is now 4:15 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

## 4) Assistment #234460 ''234460 - Elapsed Time 4''

When Travis last checked the clock it was 6:12 pm. It is now 10:42 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

#### 5) Assistment #234391 "234391 - 215936 - Elapsed Time 1"

When Eddie last checked his watch it was 6:00 pm. It is now 8:53 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

6) Assistment #234483 ''234483 - Elapsed Time 4''

When Dan last checked the clock it was 1:14 pm. It is now 4:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

7) Assistment #234419 "234419 - Elapsed Time 2" When Rachel last checked the clock it was 2:20 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

8) Assistment #234407 "234407 - Elapsed Time 2" When Cindy last checked the clock it was 3:47 pm. It is now 6:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

9) Assistment #234388 "234388 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 1:00 pm. It is now 3:29 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**10)** Assistment #234475 "234475 - Elapsed Time 4" When Matt last checked the clock it was 5:17 pm. It is now 9:39 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**11) Assistment #234446 ''234446 - Elapsed Time 3''** When Anna last checked the clock it was 2:56 pm. It is now 6:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**12**) Assistment #234458 "234458 - Elapsed Time 3" When Beth last checked the clock it was 1:34 pm. It is now 5:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**13**) Assistment #234380 "234380 - 215936 - Elapsed Time 1" When Tony last checked his watch it was 5:00 pm. It is now 7:32 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

14) Assistment #234437 "234437 - Elapsed Time 3"

When Sarah last checked the clock it was 4:36 pm. It is now 8:10 pm. How much time has elapsed?

Answer: \_\_:\_\_ (hours:minutes)

15) Assistment #234436 ''234436 - Elapsed Time 3''

When Danielle last checked the clock it was 7:38 pm. It is now 10:23 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

### 16) Assistment #234471 ''234471 - Elapsed Time 4''

When Andrew last checked the clock it was 5:19 pm. It is now 8:52 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

17) Assistment #234384 "234384 - 215936 - Elapsed Time 1"

When Jeff last checked his watch it was 1:00 pm. It is now 3:20 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**18)** Assistment #234381 "234381 - 215936 - Elapsed Time 1" When Matt last checked his watch it was 7:00 pm. It is now 9:21 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

\_\_\_\_\_

**19) Assistment #234406 ''234406 - Elapsed Time 2''** When Cindy last checked the clock it was 2:31 pm. It is now 5:00 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

20) Assistment #234386 "234386 - 215936 - Elapsed Time 1" When Evan last checked his watch it was 7:00 pm. It is now 9:33 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

**21)** Assistment #234456 ''234456 - Elapsed Time 3'' When Lindsay last checked the clock it was 7:45 pm. It is now 11:19 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

22) Assistment #234434 "234434 - Elapsed Time 3" When Kate last checked the clock it was 7:44 pm. It is now 11:13 pm. How much time has elapsed?

Answer: \_\_\_\_\_ (hours:minutes)

## Problem Set "Counting Methods - THE SKILL BUILDING SET" id:[15528]

#### 1) Assistment #120292 ''120292 - Calvin is making ...''

Calvin is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make without sausage?

Pizza Pi's Pizzeria \$6.99 specia		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Ori <mark>gina</mark> l

### 2) Assistment #119978 ''119978 - Jenny is ordering...''

Jenny is ordering a salad from the menu shown below. If she picks one item from each category, how many different salads can she make with peppers?

Gar	den ens ore	
Lettuce	Vegetable	Dressing
Iceberg	Tomatoes	Vinaigrette
Romaine	Carrots	Ranch
Bibb	Peppers	Caesar
	Onions	

## 3) Assistment #120307 ''120307 - Kaitlin is gettin...''

Kaitlin is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make without a large popcorn?

	Golden Reel Cinema	8
Popcorn	Snacks	Soda
Kiddie Medium Large Jumbo	Candy Bar Pretzel Hot Dog Ice Cream	Orange Soda Root Beer Ginger Ale

## 4) Assistment #120029 ''120029 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with peppers?

Pizza Pi's Pizzeria \$6.99 special!		\$6.99 special!
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 5) Assistment #119962 "119962 - How many ways can..."

How many ways can the vases shown below be organized on the shelf if the red vase does not move?



## 6) Assistment #120023 ''120023 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with tomatoes?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 7) Assistment #119947 "119947 - Penny is going to..."

Penny is going to flip a coin 4 times. How many outcomes are there in which she gets tails a total of 3 times?

## 8) Assistment #119951 "119951 - Kenny is going to..."

Kenny is going to flip a coin 4 times. How many outcomes are there in which he gets heads a total of 0 times?

## 9) Assistment #120000 ''120000 - Tim is making a p...''

Tim is making a pizza from the menu below. If he chooses one item from each category, how many different pizza combinations can he make with ham?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

## 10) Assistment #119917 "119917 - Blair is making a..."

Blair is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make without pepperoni?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

### 11) Assistment #120022 "120022 - Patty is making a..."

Patty is making a pizza from the menu below. If she chooses one item from each category, how many different pizza combinations can she make with mushrooms?

Pizza Pi's Pizzeria \$6.99 special!		
Meats	Vegetables	Crust
Pepperoni Ham Sausage Beef	Peppers Onions Tomatoes Mushrooms Spinach	Deep Dish Thin Crust Original

### 12) Assistment #120407 ''120407 - Nancy is getting ...''

Nancy is getting snacks from the movie theater concession stand. If she picks one item from each category, how many different combinations can she make with an ice cream?

### Problem Set "Range - THE SKILL BUILDING SET" id:[8979]

### 1) Assistment #58435 ''58435 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 121?

52, 67, 27, 73, 24, 107, 84

85202

0 145

0 158

2) Assistment #58437 ''58437 - 57506 - Range, Missing number, 8''

What number should be added to the following list to get a range of 129?

41, 55, 39, 67, 5, 101, 78 79 191 134 161

**3**) Assistment #58386 ''58386 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.67, 54.67, 32, 106, 6, 35, 143

## 4) Assistment #58442 ''58442 - 30370 - range-table-female''

The coach for the lacross Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Shaun	10, 6, 17, 14, 25, 18, 8, 4, 23, 10
Julia	16, 19, 6, 9, 9, 2, 15, 30, 13, 11

What is the **range** number of points scored by Julia?

5) Assistment Rachel's sco	<b>#58475 ''58475 - 57508 - Range, with Context, 8''</b> res in 8 math tests are shown below. What is the range of Rachel's scores?
	26, 31, 23, 29, 16, 24, 40, 48
6) Assistment	#58251 ''58251 - Range''
Calculate the	e range of the following numbers:
	52, 43, 3, 124, 78, 137
	52, 34, 9, 106, 84, 139, 106
8) Assistment What numbe	<b>#58420 ''58420 - 57507 - Range, Missing number, 10''</b> or should be added to the following list to get a range of 122?
	50, 53, 65, 38, 88, 120, 99, 131, 146
19	
23	
24	
) 31	

## 9) Assistment #58443 ''58443 - 30370 - range-table-female''

The coach for the ping-pong Game needs to pick one of the two players for the team. The table below shows the number of points each of the players scored in their last 10 games.

Name of player	Number of points scored on the last ten games
Daniel	16, 10, 19, 17, 20, 18, 13, 3, 26, 8
Amanda	18, 22, 5, 10, 12, 2, 21, 30, 16, 16

# What is the **range** number of points scored by Amanda?



#### 10) Assistment #58466 "58466 - 57511 - Range, with Context, 6"

The All-USA Physics team coach needs to pick one of two people for the All-USA Physics team. Points obtained by Gary and Ross are given below.

What is the range of points obtained by Ross?

Gary	15, 8, 18, 18, 16, 18
Ross	25, 20, 14, 23, 15, 29

**11)** Assistment #58378 ''58378 - 57504 - Range, 7'' Calculate the **range** of the following numbers:

185.33, 31.67, 27, 114, 4, 31, 133

12) Assistment #58488 ''58488 - 57509 - Range, with Context, 5'' Beth's scores in 5 history tests are shown below. What is the range of Beth's scores?

33, 20, 16, 52, 25

13) Assistment #58247 "58247 - Range"

Calculate the **range** of the following numbers:

54, 47, 12, 106, 91, 127

14) Assistment #58474 ''58474 - 57508 - Range, with Context, 8'' Beth's scores in 8 math tests are shown below. What is the range of Beth's scores?

27, 32, 24, 26, 11, 30, 37, 48



### 15) Assistment #58458 ''58458 - 57510 - Range, with Context, 7''

The All-USA Math team coach needs to pick one of two people for the All-USA Math team. Points obtained by Joe and Ross are given below.

What is the range of points obtained by Joe?

Joe	23, 28, 20, 12, 21, 19, 31
Ross	15, 9, 15, 19, 26, 16, 22

**16**) Assistment #58369 ''58369 - 27424 - Find the Range'' Calculate the **range** of the following numbers:

54, 30, 14, 112, 93, 147, 112

17) Assistment #58250 ''58250 - Range''

Calculate the **range** of the following numbers:

67, 37, 17, 118, 86, 137

### 18) Assistment #58399 "58399 - What number shoul..."

What number should be added to the following list to get a range of 128?

69, 46, 8, 124, 97

123137

0 136

0 151

#### 19) Assistment #58403 "58403 - What number shoul..."

What number should be added to the following list to get a range of 113?

59, 34, 15, 119, 77

0 118

0 129

- 128
- 0 140