

Laurel Pytko

Discipline/Subject: Geometry - College

Grade Level: 10

Topic: 3.1 Identify Pairs of Lines and Angles

Instructional Objective/Rationale – Students will be able to:

1. Define and identify parallel lines, skew lines, and parallel planes.
2. Define and identify transversal
3. Define and identify corresponding angles, alternate interior and exterior angles, and consecutive interior and exterior angles.

Aim – Laying the groundwork for several Massachusetts Geometry Frameworks

Development of the Lesson –

1. Before class starts I'll draw a vertical pair on the board with expressions as the angle measures. Students will be asked to solve for x , and find the angle measures.
Suppose that $m\angle 1 = -5x + 35$ and $m\angle 2 = 15x - 13$.

After giving students 5 minutes on the Do Now, have a student put their solution on the board.

2. As the student is putting his/her solution on the board review terms with the rest of the class. (Supplementary, Complementary, adjacent and vertical angles, and Linear pairs)
3. Student finishes writing their answer, go over it as a class.
4. While students are doing the do now write these definitions on the board
 - a. Parallel Lines – lines which do not intersect and are coplanar
 - b. Skew Lines – lines which do not intersect and are not coplanar
 - c. Parallel Planes – planes which do not intersect
 - d. Transversal – A line that intersects two or more coplanar lines at different points
 - e. Corresponding Angles – two angles with corresponding positions
 - f. Alternate Interior Angles – lie between the two lines and on opposite sides of the transversal
 - g. Alternate Exterior Angles – lie outside the two lines and on opposite sides of the transversal
 - h. Consecutive Interior Angles – lie between the two lines and on the same side of the transversal
 - i. Consecutive Exterior Angles – lie outside the two lines and on the same side of the transversal

5. Have students finish copying these definitions before they leave for lunch. While they are copying the definitions draw these diagrams on the other side of the board.

6. Use the diagrams to go over the definitions of each term they copied down. Break down what the definitions actually mean and show them examples. Make sure you're asking students a lot of questions, and making sure everyone is involved and paying attention.

Material of Instruction – For this lesson I will need

1. White board and Markers

Application – Draw this diagram and go through the rows asking everyone to identify an angle pair.

Summary –

- Review all the terms, making sure each student is involved in discussion
 - How do we know lines are parallel? Skew? Etc.
 - Name a pair of corresponding angles on this diagram. Alternate exterior? Etc.
- Give students a head up of when they'll need to have their definitions memorized for a quiz
- Assign Homework

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