

Due: 2/14/17 at 5:00PM

Instructions: Your answers to the following questions do not need to be lengthy or written in complete sentences, but should reflect preparation for our discussion about Chapter 3 at the beginning of class.

Questions:

1. True or false: Any two lines either intersect or are parallel. Explain.

This statement is true only if you are considering geometry in a plane. In space, two lines may be neither parallel nor intersecting; such lines are called skew lines.

2. What are the names for the four kinds of angle pairs that are formed when two lines are intersected by a transversal?

alternate interior angles, same-side interior angles (or consecutive interior angles), corresponding angles, alternate exterior angles

3. Complete this sentence in three different ways:

If two lines and a transversal form _____ angles that are congruent, then the lines are parallel.

alternate interior; corresponding; alternate exterior

4. If two lines are cut by a transversal and corresponding angles are not congruent, what can you conclude?

The lines are not parallel.

5. Complete the following sentence in two different ways:

Through a point not on a line, there is one and only one line _____ to the given line.

parallel; perpendicular.

6. Which postulates are necessary for the constructions in section 3.5 to work?

The Parallel Postulate and the Perpendicular Postulate

7. Does it matter which two points on a line you use to calculate its slope?

No; although the coordinates of the chosen points will differ, the slope will be the same no matter which two points are used.

8. How would you find the slope of the line with equation $5x - 2y = 10$?

Write the equation in slope-intercept form by solving for y . In this form, the coefficient of x will be the slope of the line.

9. For what type of line is it impossible to write an equation in slope-intercept form or point-slope form? Explain.

A vertical line; the slope of a vertical line is undefined.

10. How can you write the equation of the line $y = 5$ in slope-intercept form? What are the slope and y -intercept of this line?

$y = 0x + 5$; the slope is 0 and the y -intercept is 5.

Muddiest Point:

What questions do you have about the notes you took in Chapter 3, or anything from this week?



MML Homework Questions:

Are there any MML homework problems from Chapter 3 that you would like to discuss?