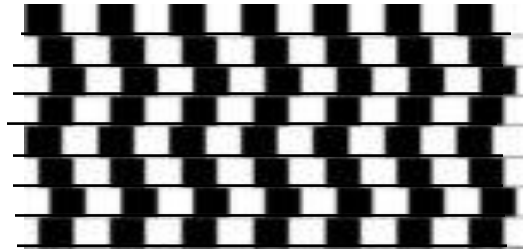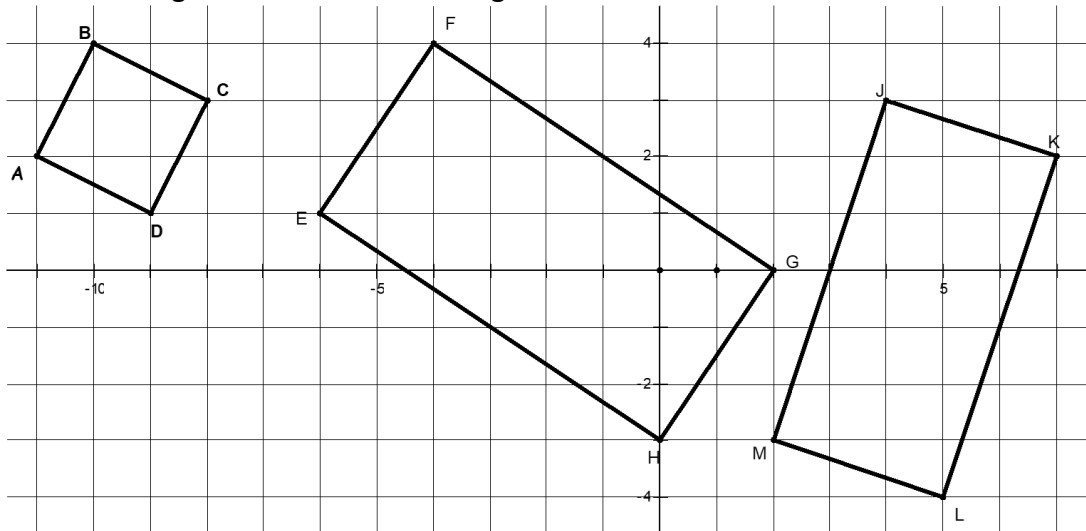Name: _____ Date: _____ Period: _____

Unit 6 Day 5 - Perpendicular, Parallel or Neither Classwork

How do you know lines are perpendicular, parallel or neither?
Look at the picture at the right and determine if the lines are
perpendicular, parallel or neither.

Three rectangles are drawn in the diagram below.

1.   Find the slope of each of the sides and label each side with its slope. What do you notice about the slopes of opposite sides? What do you notice about the slopes of the sides that make right angles?

2.   What is true about the slopes of parallel lines?

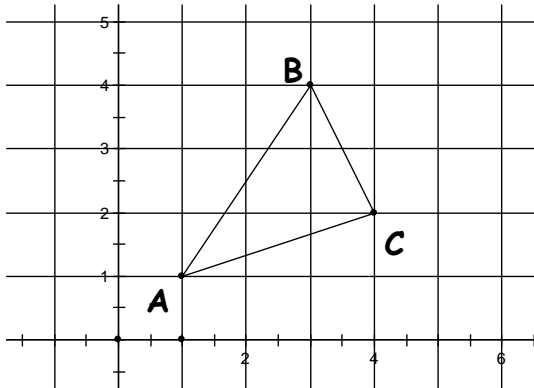What is true about the slopes of perpendicular lines?

3.   Given the line at the right draw a line that is perpendicular to it and a line that is parallel to it. Give the slope of the original line and the two new lines.
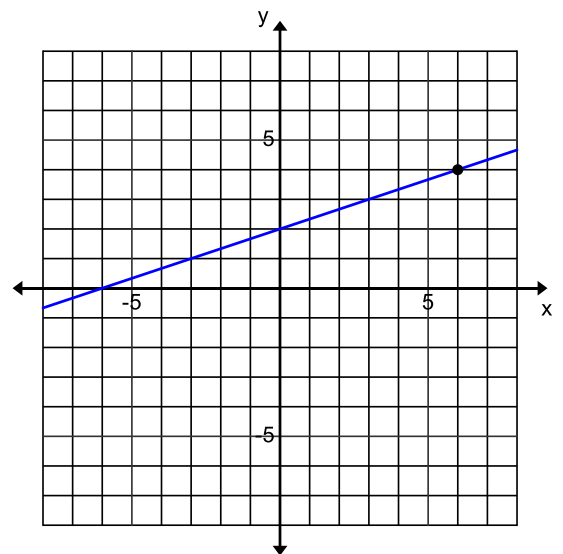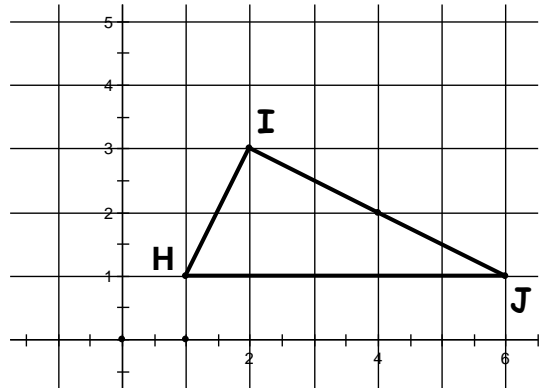
4. What makes a triangle a right triangle?

Find the slope of each side of the triangle. Then determine if the triangle is a right triangle.
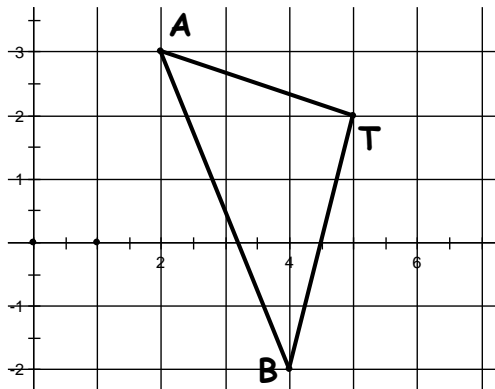
5.

Slope of $\overline{AB}$ =
Slope of $\overline{BC}$ =
Slope of $\overline{CA}$ =
Is $\triangle ABC$ a right triangle?
How do you know?

6.

Slope of $\overline{HI}$ =
Slope of $\overline{IJ}$ =
Slope of $\overline{HJ}$ =
Is $\triangle HIJ$ a right triangle?
How do you know?

7.

Slope of $\overline{AT}$ =
Slope of $\overline{BT}$ =
Slope of $\overline{BA}$ =
Is $\triangle ATB$ a right triangle?
How do you know?

8. A triangle with the following vertices :
B(3,2), U(-4, 7) and G(-8, -4).

Slope of $\overline{BU}$ =
Slope of $\overline{UG}$ =
Slope of $\overline{GB}$ =
Is $\triangle BUG$ a right triangle?
How do you know?