**Distance and Midpoint Homework #1**

**Directions:** Use the Pythagorean Theorem or Distance Formula to find the distance of each segment, and then find the midpoint of each segment. ***You must simplify radicals and fractions – no decimals!!!!***

1. G(2,6), H(-1,4) Distance: \_\_\_\_\_\_\_\_\_\_



Midpoint:\_\_\_\_\_\_\_\_\_\_\_

Slope: \_\_\_\_\_\_\_\_\_\_\_\_\_

2. J(7,10), K(-4,5) Distance: \_\_\_\_\_\_\_\_\_\_



Midpoint:\_\_\_\_\_\_\_\_\_\_\_

Slope: \_\_\_\_\_\_\_\_\_\_\_\_\_

3. D(0,2), E(4,5) Distance: \_\_\_\_\_\_\_\_\_\_



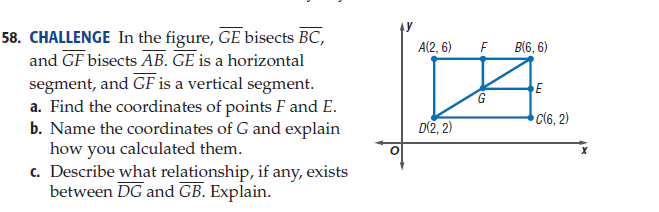
Midpoint:\_\_\_\_\_\_\_\_\_\_\_

Slope: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions:** M is the midpoint of . Find the missing endpoint’s coordinates based on the given information.

4. M(2,3), X(-1,5) Find Y(x,y)

5. M(3,1), Y(-4,7) Find X(x,y).



Use figure to the left for 6-8.

**In this figure, bisects and bisects .**

6. Find the coordinates of F, E and G. F: \_\_\_\_\_\_

E: \_\_\_\_\_\_\_

G: \_\_\_\_\_\_\_

7. Find the following lengths by calculating the distance between each endpoint.

AB=\_\_\_\_\_\_\_\_\_\_\_ BE=\_\_\_\_\_\_\_\_\_\_\_

BC=\_\_\_\_\_\_\_\_\_\_\_ BF=\_\_\_\_\_\_\_\_\_\_\_

CD=\_\_\_\_\_\_\_\_\_\_\_ BG=\_\_\_\_\_\_\_\_\_\_\_

BD=\_\_\_\_\_\_\_\_\_\_\_ DG=\_\_\_\_\_\_\_\_\_\_\_

8. Name conclusions or relationships that you can conclude based on the information you found in #6 and 7. It must be based on what YOU found, NOT what was given to you.