Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr. \_\_\_\_\_\_\_\_\_

Segment Relationships and Review Notes

**Directions:** You must show the geometry and justify each step.

1. Find the value of the variable and the length of GH if G is between P and H.

PG= 3x + 2, GH= 5x – 6, PH= 7x

Draw the picture:

Geometry: Justification:

2. M is the midpoint of EK. Find the value of X and the length of EK.



Geometry: Justification:

**Directions:** Use the Pythagorean Theorem or Distance Formula to find the distance of each segment, and then find the midpoint of each segment and slope. **You must simplify radicals and fractions!!!! You must show all work for each problem.**

3. A(-4,2), B(8,-6) Distance: \_\_\_\_\_\_\_\_\_\_



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

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

4. Find the coordinates of D if M(-6,4) is the midpoint of DF and F(-5,-3). You must show all work, from start to finish.

Directions: DRAW and LABEL a figure for each relationship.

5. $<RST$ with $\vec{SH} as an angle bisector$

6. $\overbar{LK}⊥\overleftrightarrow{MN}$

7. $\overbar{RT}≅\overbar{SP}$

8. $\overleftrightarrow{UR} is a segment bisector to \overbar{TP}$

9. <XYZ and <XYW are linear pairs.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr. \_\_\_\_\_\_\_\_\_

Segment Relationships and Review HW

1. Find the value of the variable and the length of GH if G is between P and H.

PG= 2x – 4, GH= 7x + 1 PH= 8x

Draw the figure:

Geometry: Justification:

2. M is the midpoint of EK. Find the value of X and the length of EK.



Geometry: Justification:

3. Directions: Use the Pythagorean Theorem or Distance Formula to find the distance of each segment, and then find the midpoint of each segment and slope. **You must simplify radicals and fractions!!!! You must show all work for each problem.**

A(6,-2), B(4,-10) Distance: \_\_\_\_\_\_\_\_\_\_



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

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

4. Find the coordinates of D if M(-1,6) is the midpoint of DF and F(2,9). You must show all work, from start to finish. You will be graded on your set up and how you solve algebraically.

Directions: DRAW and LABEL a figure for each relationship.

5. $<SRT$ with $\vec{RH} as an angle bisector$

6. $\overleftrightarrow{MN} is a segment bisector of \overbar{TP}$

7. $\overbar{AB}≅\overbar{FR}$

8. $\overleftrightarrow{FR}⊥\overleftrightarrow{EB}$

9. <JCK and <KCL are linear pairs.