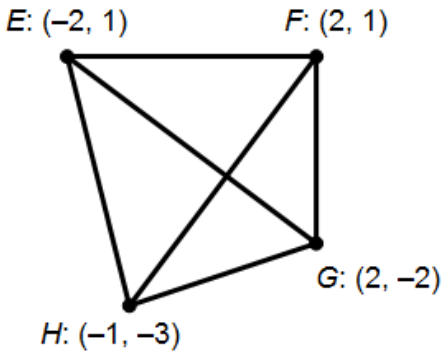
Geometry R – Mrs. Cowen
Unit 2A – Day 3 HW

Name_____
Date_____

1. The following figure is called a "kite" in geometry.



Determine if the following statements about the kite are true or false and justify your answer using the slope formula.

a. $\overline{EH} \,//\, \overline{FG}$

b. $\overline{EG} \perp \overline{HF}$

---

2. Write the equation of the line that passes through the points (3,7) and (-2, -3). Give your answer in both "**Point – Slope**" and "**Slope-Intercept**" forms.

3. Determine whether each pair of lines are *parallel*, *perpendicular*, or *neither*. Explain your reasoning.

a. $y = -5x + 12$
$y = \frac{1}{5}x - 6$

b. $2y + x = 6$
$3x + 6y = 12$

c. $x = -7$
$y = 5$

4. Determine an equation for each line described. Write your answer in either "**Point – Slope**" form or "**Slope-Intercept**" form.

a. What is the equation of a line *parallel* to $y = 7x - 8$ that passes through the point (0, 5)?

b. What is the equation of a line *parallel* to $4x + y = -7$ that passess through the point (2, -9)?

c. What is the equation of a line *perpendicular* to $-5x + 2y = -2$ that passes through the point (-1, 3)?

d. What is the equation of a line *perpendicular* to $y = 5$ that passes through the point (4, -3)?

5. Find a point 1/3 of the way from B to A.