PAP Geometry **Name_____**
1.5 HW – Parallel and Perpendicular Lines **Date _____Period_____**

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

1. line *r*: $2y + x = 6$

line *s*: $3x + 6y = 12$

Determine an equation for each parallel line described. Write your answer in both point-slope form and slope-intercept form.

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

3. What is the equation of a line parallel to $y = \frac{1}{3}x - 4$ that passes through $(9, 8)$?

Determine an equation for each perpendicular line described. Write your answer in both point-slope form and slope-intercept form.

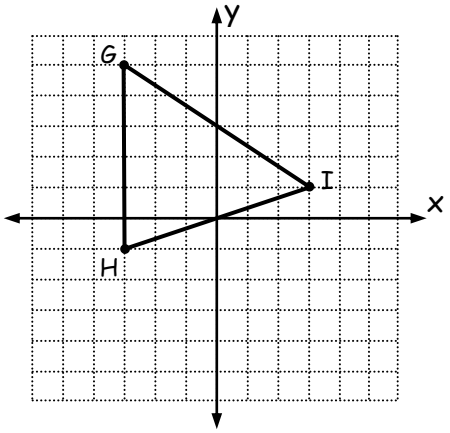
4. What is the equation of a line perpendicular to $y = -3x + 4$ that passes through $(-1, 6)$?

5. What is the equation of a line perpendicular to $y = \frac{3}{4}x + 12$ that passes through (12, 3)?

Calculate the distance from the given point to the given line.

6. Point: $(-1, -2)$; Line: $f(x) = -4x + 11$

7. Find the equation of the perpendicular bisector of $\overline{GI}$. Write in slope-intercept form.



8. Find the unknown coordinate so the line through the points has the given slope.

(x,7) and (4, -3); slope = -1