**Geometry Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parallel and Perpendicular Worksheet**

**Homework Assignment HW #3**

***Write in point-slope form the equation of the line that is parallel to the given line and passes through the given point. Your final answer should be in slope-intercept form.***

1. *y* = *x* + 5, (-1, -1) 2. *y* = -3*x* + 1, (2, 4) 3. , (3, 3)

 m = \_\_\_\_\_\_\_\_\_\_\_\_\_ m = \_\_\_\_\_\_\_\_\_\_\_\_\_ m = \_\_\_\_\_\_\_\_\_\_\_\_\_

 point \_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_

point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

final:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ final:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ final:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Write in slope-intercept form the equation of the line that is parallel to the line in the graph and passes through the given point.***

4. m = \_\_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_

 point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 final:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Use point-slope form to write an equation of the line that is perpendicular to the given line and passes through the given point.***

5. *y* = 3*x* - 1, (1, -3) 6. , (8, 5) 7. *y* = *x* + 2, (3, 0)

 m = \_\_\_\_\_\_\_\_\_\_\_\_\_ m = \_\_\_\_\_\_\_\_\_\_\_\_\_ m = \_\_\_\_\_\_\_\_\_\_\_\_\_

 point \_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_

point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Write in point-slope form the equation of the line that is perpendicular to the line in the graph and passes through the given point.***

8. m = \_\_\_\_\_\_\_\_\_ 9. m = \_\_\_\_\_\_\_\_\_

 point \_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_

 point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point-slope:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Complete the statement with always, sometimes, or never.***

10. A horizontal line is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ perpendicular to a vertical line

11. The product of the slopes of two nonvertical perpendicular lines is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -1

12. The line *y* = 2*x* + 3 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ perpendicular to a line with slope -2

13. The line  is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ perpendicular to a line with slope 3.

***Write an equation in point-slope form for the perpendicular bisector of the segment.***

14. $\overbar{AB}$ where A(1,2) and B(5,3) Midpoint: Slope: Perpendicular Slope:

 Equation:

15. $\overbar{CD}$ where C(-2,3) and D(0,9) Midpoint: Slope: Perpendicular Slope:

 Equation:

Slope Formula: Midpoint Formula: Point-Slope Equation: Slope-Intercept Form