**Algebra 1 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parallel and Perpendicular Worksheet**

**5.6 Homework Assignment E7 & E8**

***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:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. *y* = 2*x* – 11, (3, 4) 5. , (8, -10) 6. , (-4, -4)

 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.***

7. m = \_\_\_\_\_\_\_\_\_\_\_\_\_ point \_\_\_\_\_\_\_\_\_\_\_\_

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

 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.***

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

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

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

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

**10.** What is the slope-intercept form of the equation of the line parallel to the line in the graph that passes

 through the point (-1, 1)? After completing the work, circle your final answer.



 **A.** *y* = 2*x* – 3

 **B.** *y* – 3 = 2(*x* – 1)

 **C.** *y* = -2*x* + 3

 **D.** *y* = 2*x* + 3

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

11. *y* = 3*x* - 1, (1, -3) 12. , (8, 5) 13. *y* = *x* + 2, (3, 0)

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

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

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

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

14. , (0, 3) 15. , (8, 5) 16. *y* = -2*x* + 8, (-3, 1)

 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 perpendicular to the line in the graph and passes through the given point.***

17. m = \_\_\_\_\_\_\_\_\_ 18. m = \_\_\_\_\_\_\_\_\_

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

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

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

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

 19. m = \_\_\_\_\_\_\_\_\_ 20. m = \_\_\_\_\_\_\_\_\_

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

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

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

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

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

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

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

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

**25.** Choose which lines are perpendicular. After doing the necessary work, circle your final answer.

Line *p* passes through (4, 0) and (6, 4)

Line *q* passes through (0, 4) and (6, 4)

Line *r* passes through (0, 4) and (0, 0)

 **A.** Line *p* and line *q* **B.** Line *p* and line *r* **C.** Line *q* and line *r* **D.** None of These

**26.** Which are **not** slopes of perpendicular lines? Circle your answer.

 **A.** 1 and -1 **B.** and 

 **C.**  and – 31 **D.** and 

***a) Write an equation in slope-intercept form of a line parallel to the indicated line***

***b) Write an equation in slope-intercept form of a line perpendicular to the indicated line***

27. *y* = 2*x* – 4 through point (4, 6)

 Work for Parallel Line Work for Perpendicular Line

Final Answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Final Answer:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_