

Name _____ Date _____ Period _____

Parallel and Perpendicular Lines

1. Write the equation of the line that is parallel to the graph of $y = \frac{1}{2}x + 6$, and whose y-intercept is -2.
2. Write the equation of the line that is parallel to the graph of $y = -4x - 9$, and whose y-intercept is 3.
3. Write the equation of the line that is parallel to the graph of $3x - y = 5$, and whose y-intercept is (0, -7).
4. Write the equation of the line that is parallel to the graph of $2x + y = 5$, and whose y-intercept is (0, 4).

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

5. (3, 2), $y = x + 5$
6. (-2, 5), $y = -4x + 2$
7. (-3, 4), $3y = 2x - 3$
8. (-1, -4), $9x + 3y = 8$
9. Write the equation of the line that is perpendicular to the graph of $y = \frac{1}{2}x + 6$, and whose y-intercept is (0, -2).
10. Write the equation of the line that is perpendicular to the graph of $y = -4x - 9$, and whose y-intercept is (0, 3).
11. Write the equation of the line that is perpendicular to the graph of $3x - y = 5$, and whose y-intercept is -7.

12. Write the equation of the line that is perpendicular to the graph of $2x + y = 5$, and whose y-intercept is 4.

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

13. $(3, 2)$, $y = x + 5$

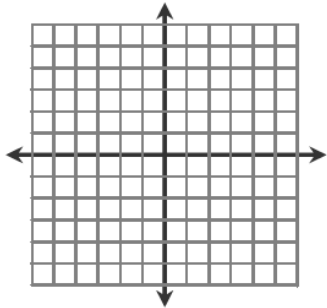
14. $(-8, 5)$, $y = -4x + 2$

15. $(-6, 4)$, $3y = 2x - 3$

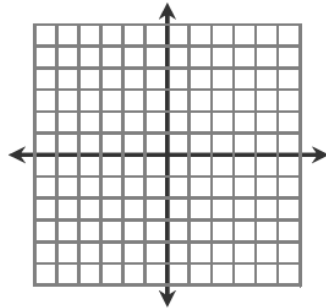
16. $(-1, -4)$, $9x + 3y = 8$

Graph the following lines and determine if they are parallel, perpendicular, coincide, or intersecting lines.

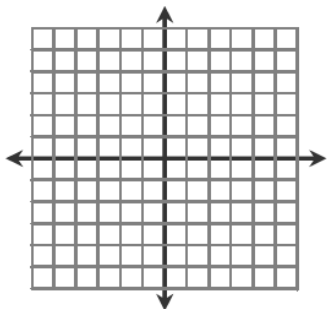
17. $y = 3x + 2$
 $9x - 3y = -6$



18. $y = -2x + 3$
 $2x - 4y = 8$



19. $y = 4x + 1$
 $8x - 2y = 2$



20. $y = \frac{2}{3}x - 2$
 $x + y = 4$

