

Practice***Parallel and Perpendicular Lines***

Determine whether the graphs of each pair of equations are parallel, perpendicular, or neither.

1. $y = 3x + 4$
 $y = 3x + 7$

2. $y = -4x + 1$
 $4y = x + 3$

3. $y = 2x - 5$
 $y = 5x - 5$

4. $y = -\frac{1}{3}x + 2$
 $y = 3x - 5$

5. $y = \frac{3}{5}x - 3$
 $5y = 3x - 10$

6. $y = 4$
 $4y = 6$

7. $y = 7x + 2$
 $x + 7y = 8$

8. $y = \frac{5}{6}x - 6$
 $x + 5y = 4$

9. $y = -\frac{3}{8}x - 9$
 $y = \frac{8}{3}x + 3$

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

10. $y = 3x + 6$; (4, 7)

11. $y = x - 4$; (-2, 3)

12. $y = \frac{1}{2}x + 5$; (4, -5)

13. $y + \frac{2}{3}x = 3$; (-6, 1)

14. $y - \frac{2}{5}x = -5$; (5, 3)

15. $y + 2x = 4$; (-1, 2)

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

16. $y = -5x + 1$; (2, -1)

17. $y = 2x - 3$; (-5, 3)

18. $4x + 7y = 3$; (-4, -7)

19. $3x - 4y = 2$; (6, 0)

20. $y = -4x - 2$; (4, -4)

21. $6x + 5y = -3$; (-6, 2)