

5-6 Practice

Form G

Write an equation of the line that passes through the given point and is PARALLEL to the graph of the given equation.

1. $(3, 2); y = 3x - 2$

2. $(-4, -1); y = 2x + 14$

3. $(-8, 6); y = -\frac{1}{4}x + 5$

4. $(6, 2); y = \frac{2}{3}x + 19$

5. $(10, -5); y = \frac{3}{2}x - 7$

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

Determine whether the graphs of the given equations are *parallel*, *perpendicular*, or *neither*. Explain.

7. $y = 4x + 5$

$-4x + y = -13$

8. $y = \frac{7}{9}x - 7$

$y = -\frac{7}{9}x + 3$

9. $y = \frac{7}{8}$
 $x = -4$

10. $y = -6x - 8$
 $-x + 6y = 12$

11. $3x + 6y = 12$

$$y - 4 = -\frac{1}{2}(x + 2)$$

12. $y = 4x + 12$

$$x + 4y = 32$$

Write an equation of the line that passes through the given point and is PERPENDICULAR to the graph of the given equation.

13. $(2, -1); y = -2x + 1$

14. $(5, 7); y = \frac{1}{3}x + 2$

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

16. $(-9, 3); 3x + y = 5$

17. $(-8, 3); y + 4 = -\frac{2}{3}(x - 2)$

18. $(0, -5); x - 6y = -2$

19. What is the slope of a line that is parallel to the x -axis?

20. What is the slope of a line that is perpendicular to the x -axis?

21. What is the slope of a line that is parallel to the y -axis?

22. What is the slope of a line that is perpendicular to the y -axis?