

4-4 Practice**Parallel and Perpendicular Lines**

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

1. $(3, 2), y = x + 5$

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

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

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

5. $(12, 3), y = \frac{4}{3}x + 5$

6. $(3, 1), 2x + y = 5$

7. $(-3, 4), 3y = 2x - 3$

8. $(-1, -2), 3x - y = 5$

9. $(-8, 2), 5x - 4y = 1$

10. $(-1, -4), 9x + 3y = 8$

11. $(-5, 6), 4x + 3y = 1$

12. $(3, 1), 2x + 5y = 7$

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

13. $(-2, -2), y = -\frac{1}{3}x + 9$

14. $(-6, 5), x - y = 5$

15. $(-4, -3), 4x + y = 7$

16. $(0, 1), x + 5y = 15$

17. $(2, 4), x - 6y = 2$

18. $(-1, -7), 3x + 12y = -6$

19. $(-4, 1), 4x + 7y = 6$

20. $(10, 5), 5x + 4y = 8$

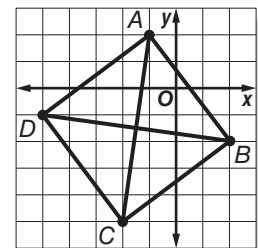
21. $(4, -5), 2x - 5y = -10$

22. $(1, 1), 3x + 2y = -7$

23. $(-6, -5), 4x + 3y = -6$

24. $(-3, 5), 5x - 6y = 9$

- 25. GEOMETRY** Quadrilateral $ABCD$ has diagonals \overline{AC} and \overline{BD} . Determine whether \overline{AC} is perpendicular to \overline{BD} . Explain.



- 26. GEOMETRY** Triangle ABC has vertices $A(0, 4)$, $B(1, 2)$, and $C(4, 6)$. Determine whether triangle ABC is a right triangle. Explain.