NAME _____ DATE _____ PERIOD _____

4-4 Practice

Parallel and Perpendicular Lines

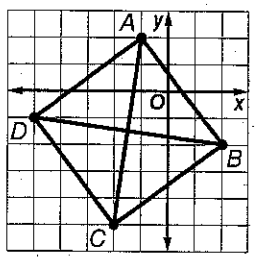
Write an equation in slope-intercept form for the line that passes through the given point and is parallel to the graph of the given equation.

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.