# 3.5 Practice WITH CalcChat® AND CalcView®


GO DIGITAL

**In Exercises 1–4, graph the linear equation.**
*Example 1*

1. $x = 4$
2. $y = -3$
3. $y = \frac{1}{2}$
4. $x = -1.5$

**In Exercises 5–8, find the $x$- and $y$-intercepts of the graph of the linear equation.**

5. $2x + 3y = 12$
6. $-6x + 9y = -18$
7. $3x = 6y + 2$
8. $\frac{3}{4} + x = \frac{1}{2}y$

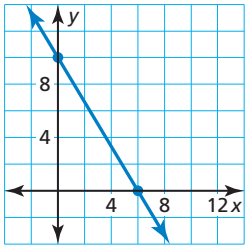
**In Exercises 9–18, use intercepts to graph the linear equation. Label the points corresponding to the intercepts.** *Example 2*

9. $5x + 3y = 30$
10. $4x + 6y = 12$
11. $-12x + 3y = 24$
12. $-2x + 6y = 18$
13. $-4x + 3y = -30$
14. $-2x + 7y = -21$
15. $2y - x = 7$
16. $3x + 5 = y$
17. $\frac{4}{3} + \frac{2}{3}x = \frac{1}{6}y$
18. $y = \frac{1}{4} - \frac{5}{2}x$

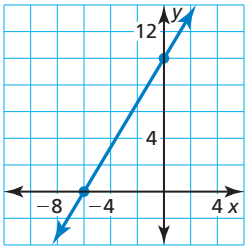
**MULTIPLE REPRESENTATIONS In Exercises 19–22, match the equation with its graph.**

19. $5x + 3y = 30$
20. $5x + 3y = -30$
21. $5x - 3y = 30$
22. $5x - 3y = -30$

A.




B.

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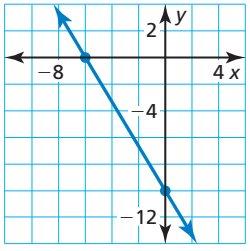
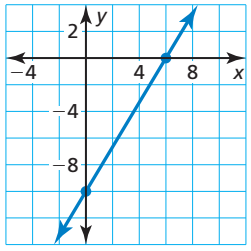



D.




23. **MODELING REAL LIFE** You have a budget of \$300 to order shirts for a math club. The equation $10x + 12y = 300$ models the total cost, where $x$ is the number of short-sleeved shirts and $y$ is the number of long-sleeved shirts. *Example 3*

   **a.** Interpret the terms and coefficients in the equation.

   **b.** Graph the equation. Interpret the intercepts.

   **c.** Find three possible solutions in the context of the problem.

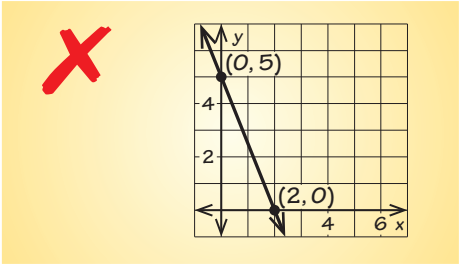
24. **MODELING REAL LIFE** Your goal is to bike and jog a total of 150 miles this month. The equation $12.5x + 6y = 150$ models this situation, where $x$ is the number of hours you bike and $y$ is the number of hours you jog.

   **a.** Interpret the terms and coefficients in the equation.

   **b.** Graph the equation. Interpret the intercepts.

   **c.** You bike for 9 hours this month. How many hours must you jog to reach your goal? How many miles do you bike? jog?

25. **ERROR ANALYSIS** Describe and correct the error in using intercepts to graph the linear equation $4x + 10y = 20$.




26. **MAKING AN ARGUMENT** To find the $x$-intercept of the graph of a linear equation, can you substitute 0 for $x$ and solve the equation? Explain.

**CONNECTING CONCEPTS In Exercises 27–30, write a set of linear equations that intersect to form the enclosed shape.**

27. rectangle
28. square
29. right triangle
30. trapezoid