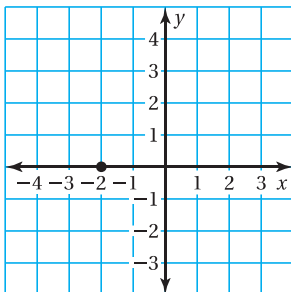## ✓ Vocabulary and Concept Check

1. **WRITING** What information do you need to write an equation of a line?

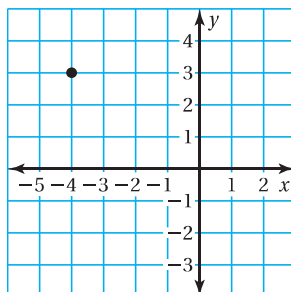2. **WRITING** Describe how to write an equation of a line using its slope and a point on the line.

Practice and Problem Solving

Write an equation of the line with the given slope that passes through the given point.
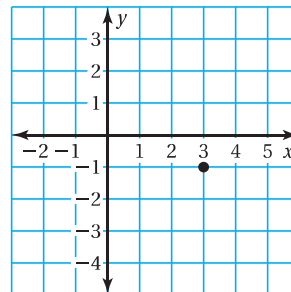
3. $m = \dfrac{1}{2}$

4. $m = -\dfrac{3}{4}$

5. $m = -3$

6. $m = -\dfrac{2}{3}$; $(3, 0)$

7. $m = \dfrac{3}{4}$; $(4, 8)$

8. $m = 4$; $(1, -3)$

9. $m = -\dfrac{1}{7}$; $(7, -5)$

10. $m = \dfrac{5}{3}$; $(3, 3)$

11. $m = -2$; $(-1, -4)$

12. **ERROR ANALYSIS** Describe and correct the error in writing an equation of the line with a slope of $\dfrac{1}{3}$ that passes through the point $(6, 4)$.

✗ $y = \dfrac{1}{3}x + 4$

13. **CHEMISTRY** At $0\,°C$, the volume of a gas is 22 liters. For each degree the temperature T (in degrees Celsius) increases, the volume V (in liters) of the gas increases by $\dfrac{2}{25}$. Write an equation that represents the volume of the gas in terms of the temperature.