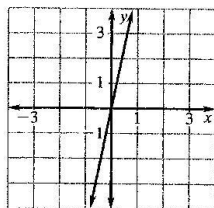


**Practice B**

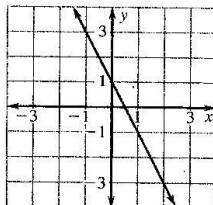
For use with pages 234–239

Determine if the graph represents a direct variation model. If yes, find the constant of variation and the slope.

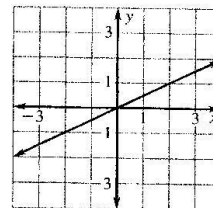
1.  $y = 5x$



2.  $y = -2x + 1$



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



Graph the equation. Find the constant of variation and the slope of the direct variation model.

4.  $y = 3x$

5.  $y = -4x$

6.  $y = 0.5x$

7.  $y = -0.2x$

8.  $y = -\frac{2}{3}x$

9.  $y = \frac{1}{4}x$

The variables  $x$  and  $y$  vary directly. Use the given values to write an equation that relates  $x$  and  $y$ .

10.  $x = 4, y = 32$

11.  $x = 36, y = 9$

12.  $x = 15, y = 45$

13.  $x = -2, y = 8$

14.  $x = 12, y = -3$

15.  $x = 10, y = 16$

16.  $x = -8, y = 12$

17.  $x = 1, y = 0.3$

18.  $x = -5, y = -8$

Assume the variables vary directly. Use an equation to find the value of  $y$ .

19. If  $x = 2$  when  $y = 8$ , find  $y$  when  $x = 16$ .

20. If  $x = 14$  when  $y = 7$ , find  $y$  when  $x = 10$ .

21. If  $x = 3$  when  $y = 4$ , find  $y$  when  $x = 24$ .

22. If  $x = 6$  when  $y = 10$ , find  $y$  when  $x = 9$ .

In Exercises 23 and 24, find an equation that relates the two variables. Then solve the problem.

23. **Circumference and Radius** The circumference  $C$  of a circle varies directly with the length of the radius  $r$ . When the circumference is  $15\pi$ , the radius is 7.5. Find the circumference when  $r = 2.5$ .

24. **Salary and Hours** The salary  $s$  an hourly employee earns varies directly with the number of hours  $h$  worked. When the salary is \$196.80, the hours worked is 24. Find the salary for a 40 hour work week.

25. **Showers** The gallons  $G$  of water used to take a shower varies directly with the number of minutes  $M$  in the shower. The standard shower head uses about 6 gallons of water per minute. Write an equation that relates  $M$  and  $G$ . Find the value of  $G$  when  $M = 8.5$ .

26. **Hooke's Law** The force  $F$  required to stretch a spring varies directly with the amount the spring is stretched  $s$ . Ten pounds is needed to stretch a spring 10 inches. Find the force required to stretch the spring 4 inches.