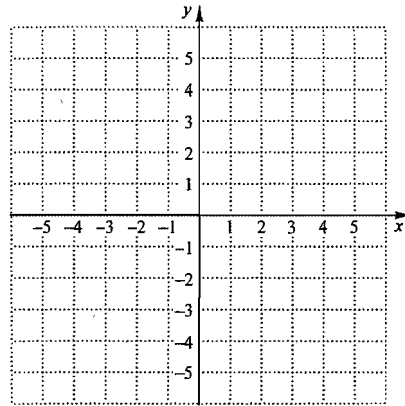


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6. $f(x) = \frac{2}{3}x - 1$

6. _____



Determine the y-intercept.

7. $y = -2x + 5$

7. _____

8. $g(x) = 4.1x - 17$

8. _____

For each pair of points, find the slope of the line containing them.

9. $(-2, 3)$ and $(1, 6)$

9. _____

10. $(-2, -1)$ and $(-5, -1)$

10. _____

11. $(\frac{1}{2}, -\frac{2}{5})$ and $(\frac{4}{5}, -\frac{3}{2})$

11. _____

12. $(-2.3, -4.6)$ and $(-1.3, -4.1)$

12. _____

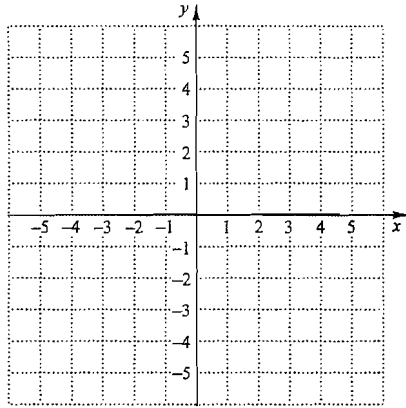
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Determine the slope and the y-intercept. Then draw a graph. Check using a third point.

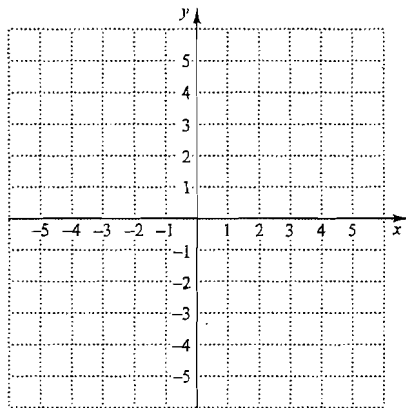
13. $g(x) = \frac{3}{2}x - 5$

13. _____



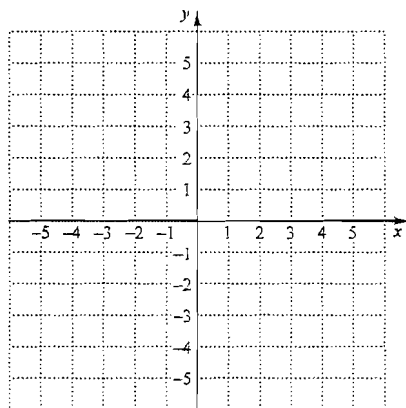
14. $3x - y = 4$

14. _____



15. $4x + 3y = 6$

15. _____

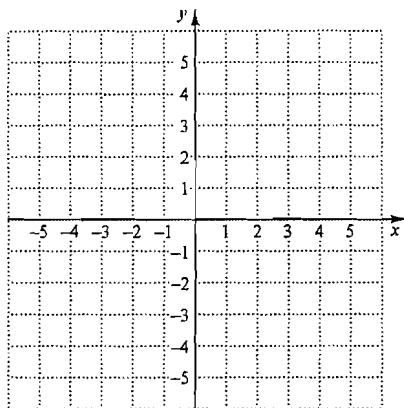


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16. $f(x) = -\frac{3}{4}x$

16. _____



Find a linear function whose graph has the given slope and y-intercept.

17. Slope $\frac{2}{9}$; y-intercept $(0, 6)$

17. _____

18. Slope -3 ; y-intercept $(0, -4)$

18. _____

19. Slope $-\frac{3}{5}$; y-intercept $(0, -\frac{1}{4})$

19. _____

20. Slope 5 ; y-intercept $(0, \frac{2}{5})$

20. _____

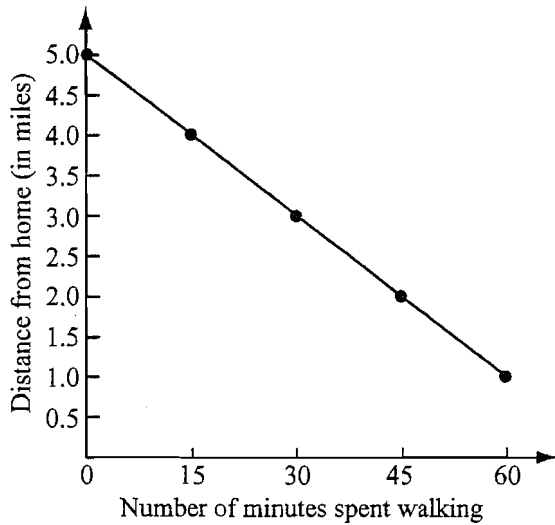
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For each graph, find the rate of change. Remember to use appropriate units.

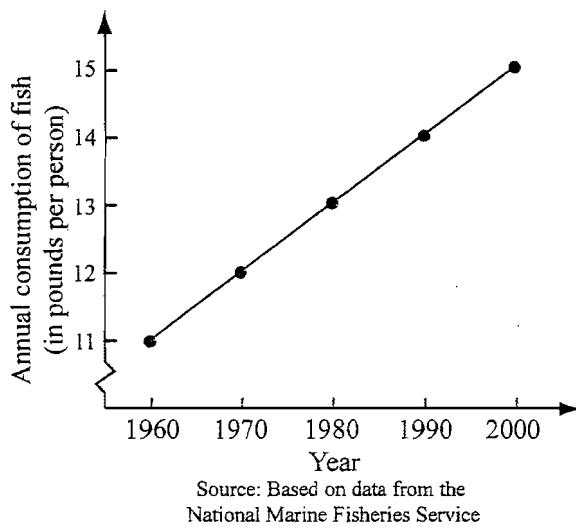
21.

21. _____



22.

22. _____



Find the rate.

23. A plane begins to descend to sea level from 20,000 ft after being airborne for 1 hr 40 min. The entire flight time is $2\frac{1}{2}$ hr. Determine the average rate of descent of the plane.

23. _____

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24. Rachel walked 360 steps on an elliptical trainer after 3 min and reached 1800 steps 12 min later. Assuming a constant rate, find Rachel's rate, in steps per hour. 24. _____

In Exercises 25 and 26, each model is of the form $f(x) = mx + b$. In each case, determine what m and b signify.

25. The cost, in dollars, of one month of Andrew's cell phone service is given by $c(x) = 0.1x + 39.95$, where x is the number of text messages sent and received. 25. _____

26. The amount, in dollars, that Chad owes on his school loan is given by $s(t) = -500t + 6000$, where t is the number of months after he has graduated. 26. _____

27. Perfect Printing uses the function given by $P(t) = -400t + 2500$ to determine the salvage value $P(t)$, in dollars, of a printer t years after it has been put into use. 27.(a) _____

a) What do the numbers -400 and 2500 signify? (b) _____

b) How long will it take the printer to depreciate completely? (c) _____

c) What is the domain of P ?

28. The trade-in value of a boat can be determined using the function given by $v(n) = -250n + 5000$. Here $v(n)$ is the trade-in value, in dollars, after n summers of use. 28.(a) _____

a) What do the numbers -250 and 5000 signify? (b) _____

b) When will the value of the boat be \$2000? (c) _____

c) What is the domain of v ?

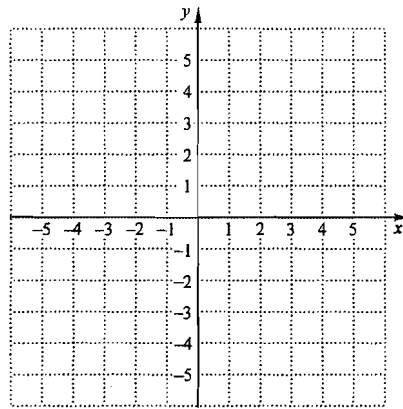
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Graph.

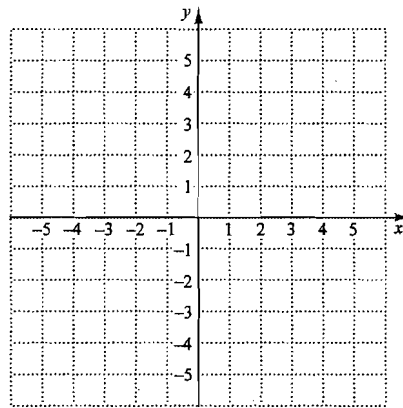
11. $y = -2$

11. _____



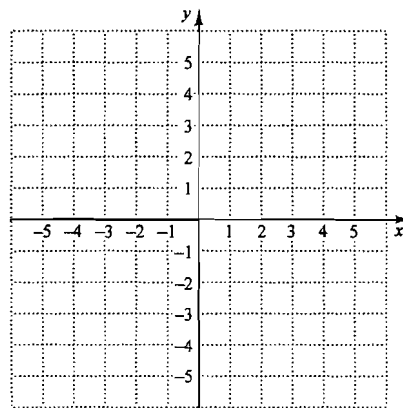
12. $x = 4$

12. _____



13. $5x = -10$

13. _____

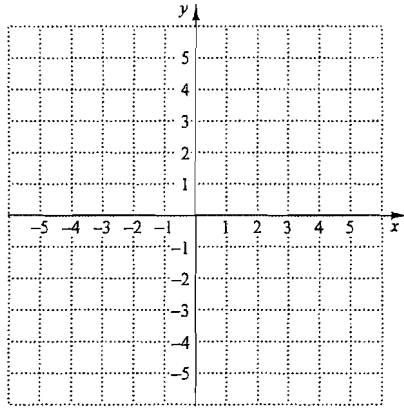


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14. $3 \cdot f(x) - 5x = 9 - 5x$

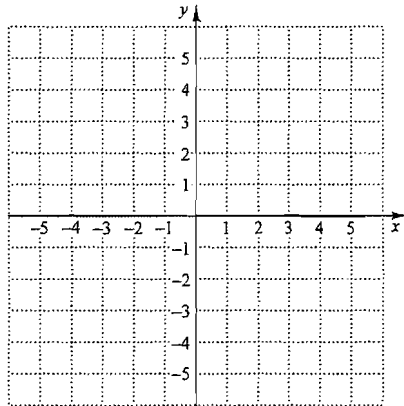
14. _____



Find the intercepts. Then graph by using the intercepts, if possible, and a third point as a check.

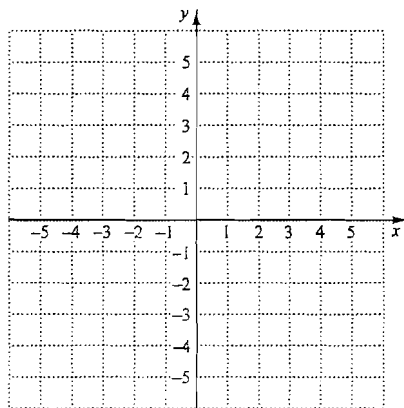
15. $x - y = 2$

15. _____



16. $y = 3x - 6$

16. _____

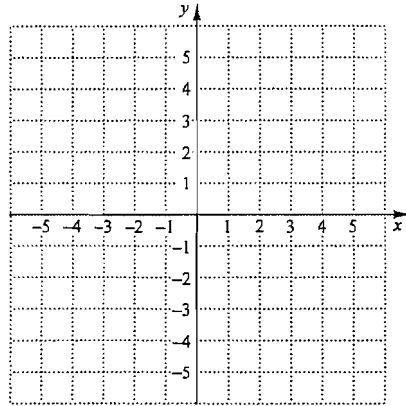


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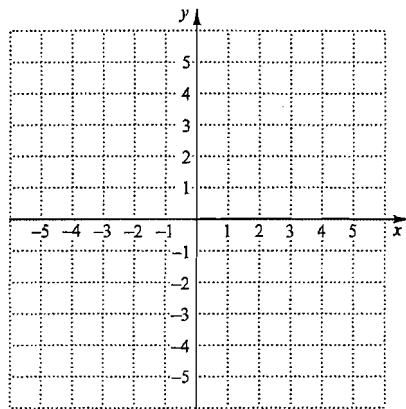
17. $2x - 5y = -10$

17. _____



18. $g(x) = 2x + 1$

18. _____



For each function, determine which of the given viewing windows will show both intercepts.

19. $f(x) = -15x + 50$

19. _____

- a) $[-10, 10, -10, 10]$ b) $[-5, 5, -20, 80]$
c) $[-60, 60, -10, 10]$ d) $[-10, 0, 0, 100]$

20. $g(x) = 0.2x + 40$

20. _____

- a) $[-10, 10, -10, 10]$ b) $[-50, 50, -200, 400]$
c) $[-5, 5, -50, 50]$ d) $[-500, 500, -50, 50]$

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Without graphing, tell whether the graphs of each pair of equations are parallel.

21. $y = 3 - 2x,$ 21. _____
 $y - 2x = 5$

22. $x - y = -2,$ 22. _____
 $5 + x = y$

Without graphing, tell whether the graphs of each pair of equations are perpendicular.

23. $f(x) = 2x - 1,$ 23. _____
 $x + 2y = 3$

24. $x + 3y = 3,$ 24. _____
 $2x = 6y - 1$

Write an equation for a linear function parallel to the given line with the given y-intercept.

25. $y = -2x + 1; (0, -3)$ 25. _____

26. $2x - 4y = 5; (0, 1)$ 26. _____

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Write an equation for a linear function perpendicular to the given line with the given y-intercept.

27. $y = 3x - 5$; $(0, 2)$ 27. _____

28. $3y + 2x = 7$; $(0, -4)$ 28. _____

Determine whether each equation is linear. Find the slope of any nonvertical lines.

29. $2x - 5y - 3 = 0$ 29. _____

30. $7(x - 4) = 2 - 3y$ 30. _____

31. $\frac{f(x)}{3} = x - 6$ 31. _____

32. $g(x) = \frac{1}{x}$ 32. _____