

practice test

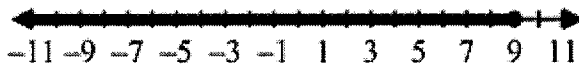
Solve and graph.

_____ 1. $-8(3d - 2) \geq -200$

a. $d \geq -9$



b. $d \leq 9$



c. $d \geq 9$

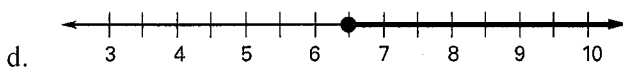
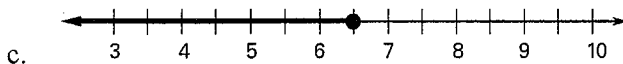
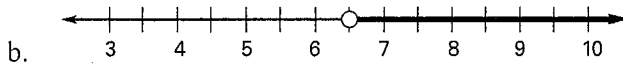


d. $d < 9$



Solve the inequality.

_____ 2. $5x - 4 \leq 3(x + 3)$. Graph your solution.

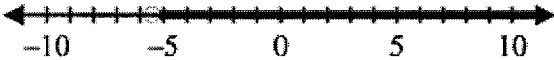
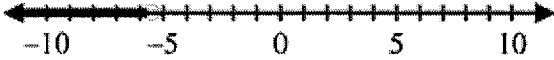
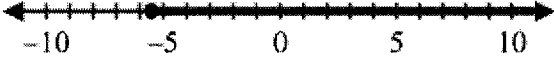



Simplify:

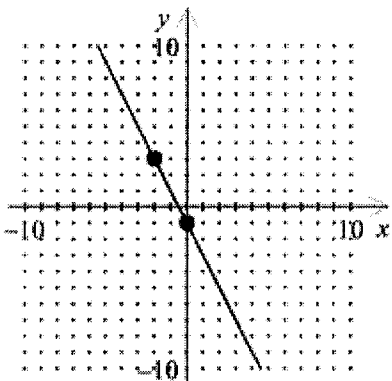
_____ 3. $3x + 1 - 4x + 4$

- a. $7x - 3$ b. $7x + 5$ c. $-x + 5$ d. $-x - 3$

Solve and graph the inequality.

4. $5x + 2 < 3(x - 3)$
- a. 
- b. 
- c. 
- d. 

5. Which of the following lines is NOT parallel to the line shown in the graph?



- a. $y + 2x = 3$ b. $-2x + y = -1$ c. $-4x - 2y = 3$ d. $-2x - y = 3$
6. Which statement is always a correct conclusion about the values of x and y in the function $y = x - 3$?
- a. The value of x is always 3 less than the value of y . b. The value of y is always less than the value of x .
 c. When the value of x is positive, the value of y is also positive. d. As the value of x increases, the value of y decreases.
- 7.

The formula relating the forces is $xd = y(L - d)$. Solve for L

- a. $L = \frac{xd}{y} + d$ b. $L = \frac{xd + d}{y}$ c. $L = \frac{xd - yd}{y}$ d. $L = \frac{yd}{x} + d$
8. For which value of x is the relation *not* a function?
 $\{(0, 1), (x, 0), (3, 5), (2, 6)\}$
 a. 1 b. 3 c. 4 d. 6
9. Find the slope and y -intercept of the line with the equation $9x + 3y = -54$.
 a. $m = 27, b = -\frac{1}{3}$ b. $m = 3, b = 18$ c. $m = -3, b = -18$ d. $m = 18, b = \frac{1}{3}$

_____ 10. Solve $y = \frac{5}{8}b + 10$ for b .

a. $b = -\frac{8}{5}y + 16$ b. $b = \frac{8}{5}y - 16$ c. $b = \frac{5}{8}y - 10$ d. $b = -\frac{5}{8}y + 10$

_____ 11. State the x - and y -intercepts of the line with the equation $y = -3x + 3$.

a. x -intercept: 3; y -intercept: -3 b. x -intercept: 1; y -intercept: 3 c. x -intercept: 3; y -intercept: 1
d. x -intercept: -3; y -intercept: 3

_____ 12. $-4(x - 4)$

a. $-4x - 4$ b. $-4x + 16$ c. $-4x - 16$ d. $-4x + 4$

Solve the equation.

_____ 13. $-x + 15 + 3x + 15 = -4$

a. -13 b. 17 c. 13 d. -17

_____ 14. The perimeter of a rectangular garden is 860 ft. The two short sides of the garden are each 30 ft long. You are asked to find the length of the other sides. Which equation models this situation?

a. $30 + x = 860$ b. $2(30) + 2x = 860$ c. $30(x - 2) = 860$ d. $30 + 2x = 860$

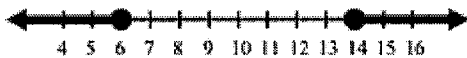
Solve. Graph your solution.

_____ 15. $-4 \leq 2x + 10 \leq 4$

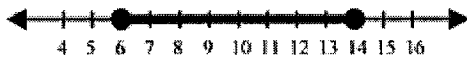
a. $-7 \leq x \leq -3$



b. $x \leq 6$ or $x \geq 14$



c. $6 \leq x \leq 14$



d. $x \leq -7$ or $x \geq -3$



Simplify:

_____ 16. $3 + 3(4 + 5)^3$
 a. 4374 b. 149 c. 2190 d. 19,686

_____ 17. Bill wants to simplify the following expression.
 $5(3x - 2y) + 2(x + 2y) - 3(3x - 2y)$
 Which of the following expressions is equivalent to the expression above?
 a. $8x$ b. $8x - 12y$ c. $8xy$ d. $8x - 8y$

_____ 18. Choose an equation of the line containing the points $(8, 3)$ and $(13, 5)$.
 a. $-4x + 10y = 68$ b. $-5x + 4y = -34$ c. $2x + 5y = 31$ d. $-2x + 5y = -1$

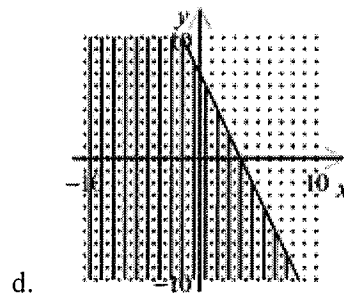
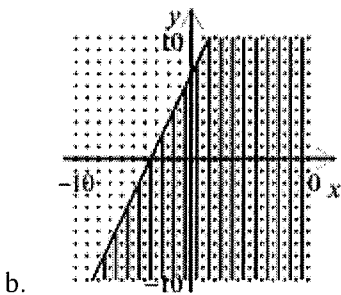
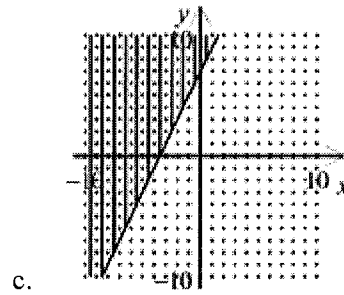
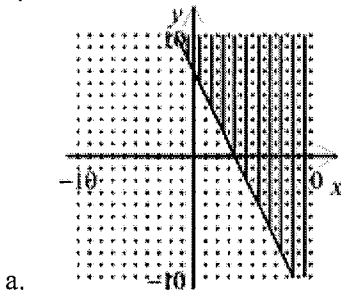
_____ 19. Select the description that matches the graph.



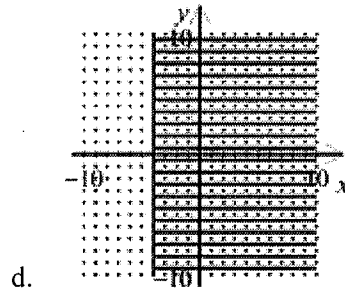
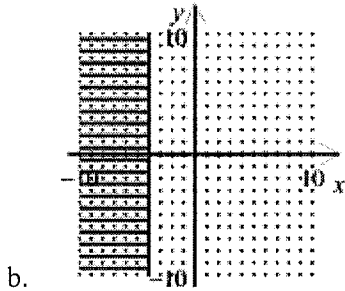
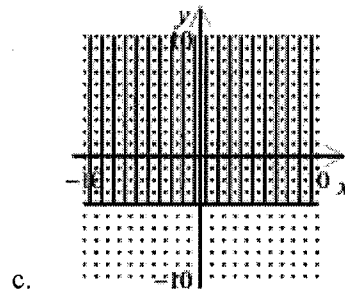
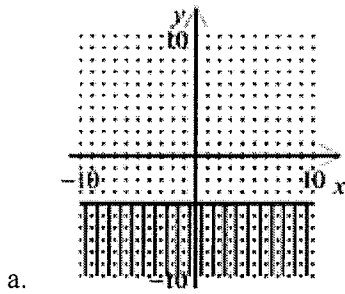
- a. integers greater than or equal to -5 b. integers less than or equal to -6 c. integers less than or equal to -7
 d. integers greater than or equal to -6

Graph.

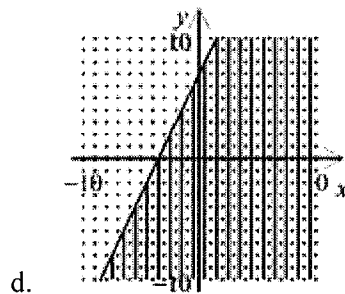
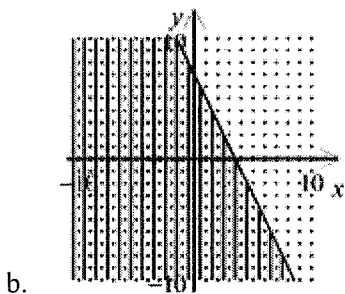
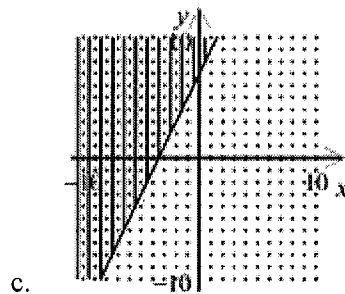
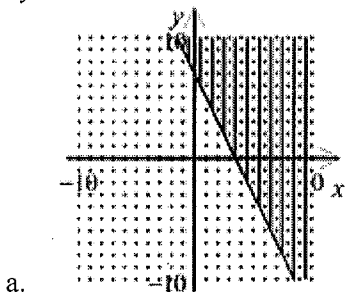
_____ 20. $-y \geq 2x - 7$



21. $x \geq -4$



22. $-y \geq 2x - 7$

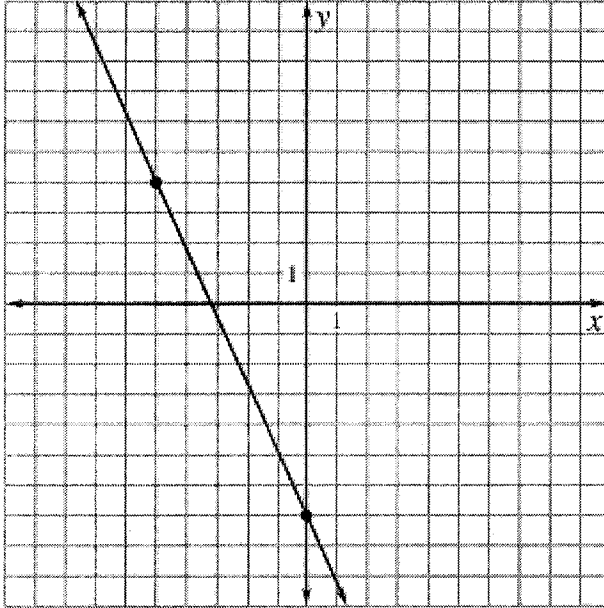


23. Simplify $3x + 2(x - 5)$.

- a. $x - 10$ b. $5x + 10$ c. $5x - 10$ d. $5x - 5$

Solve.

- _____ 24. $|x - 4| = 9$
 a. The solutions are 5 and -13 . b. The solution is -5 . c. The solutions are 13 and -5 . d. The solution is -13 .
- _____ 25. Write an equation of the line that passes through $(5, 3)$ and is parallel to the line $y = -2x + 2$.
 a. $y = 5x + 2$ b. $y = -2x + 2$ c. $y = 5x + 13$ d. $y = -2x + 13$
- _____ 26. Write an equation in slope-intercept form of the graph.



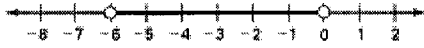
- a. $y = -\frac{11}{5}x - 7$ b. $y = -\frac{5}{11}x - 7$ c. $y = \frac{5}{11}x - 7$ d. $y = \frac{11}{5}x - 7$
- _____ 27. Write an equation in point-slope form of the line that passes through the points $(-2, 6)$ and $(2, 4)$.
 a. $y + 2 = -\frac{1}{2}(x - 6)$ b. $y - 6 = -2(x + 2)$ c. $y - 6 = -\frac{1}{2}(x + 2)$ d. $y + 2 = -2(x - 6)$
- _____ 28. Write an equation, in point-slope form, of the line that passes through the point $(-2, 5)$ and has the slope $\frac{1}{3}$.
 a. $y + 5 = \frac{1}{3}(x - 2)$ b. $y + 2 = \frac{1}{3}(x - 5)$ c. $y - 5 = \frac{1}{3}(x + 2)$ d. $y - 2 = \frac{1}{3}(x + 5)$

Solve. Graph your solution.

- ____ 29. $|x + 3| \geq 3$
 a. $x \leq -6$ or $x \geq 0$



- b. $-6 < x < 0$



- c. $x < -6$ or $x > 0$

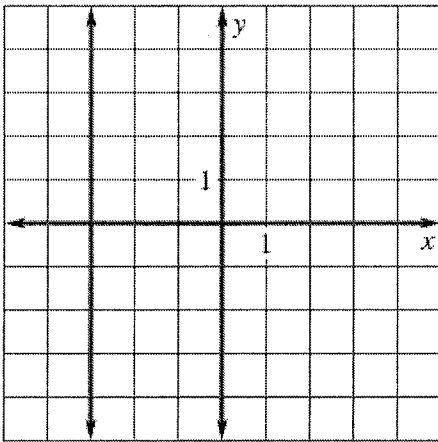


- d. $-6 \leq x \leq 0$



- ____ 30. Choose an equation, in slope-intercept form, that passes through point (3, 1) with slope 3.
 a. $y = 3x + 4$ b. $y = 3x - 8$ c. $y = -3x - 8$ d. $y = -3x + 4$

- ____ 31. Determine the slope of the line graphed below.

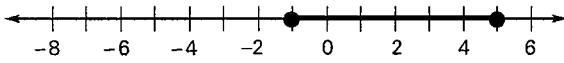
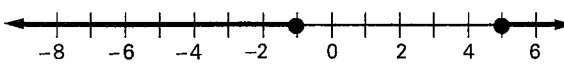
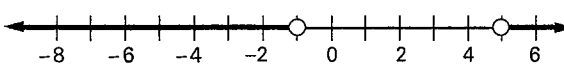
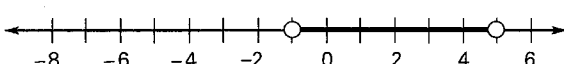


- a. 0 b. -3 c. $-\frac{1}{3}$ d. undefined
- ____ 32. Which equation corresponds to the values in the table below?

Input, x	1	2	3	4	5
Output, y	9	12	15	18	21

- a. $y = 3x + 6$ b. $y = 5x + 4$ c. $y = 4x + 5$ d. $y = 6x + 3$

33. Solve $|x - 2| \leq 3$ and graph your solution.

- a. 
- b. 
- c. 
- d. 

34. Find the slope of the line that contains $(2, 4)$ and $(4, 4)$.

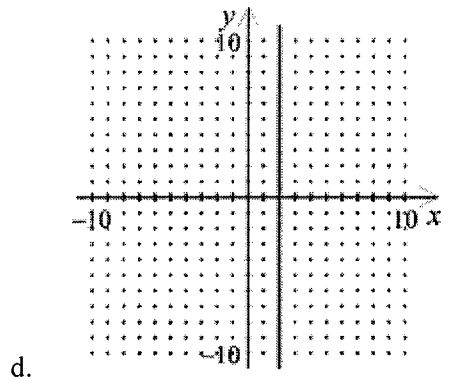
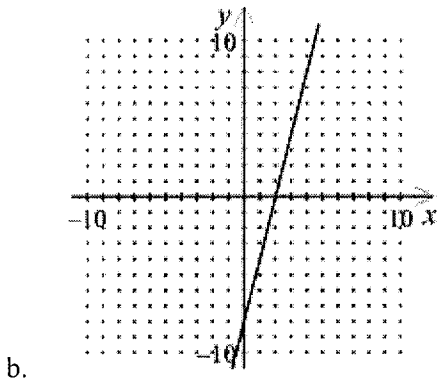
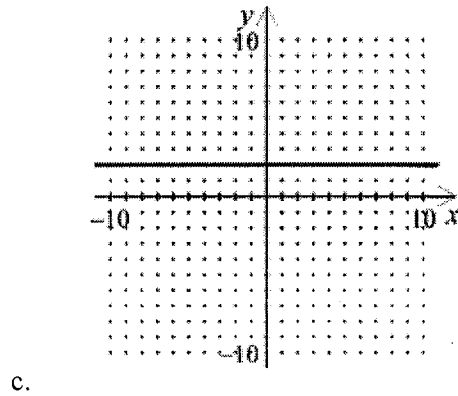
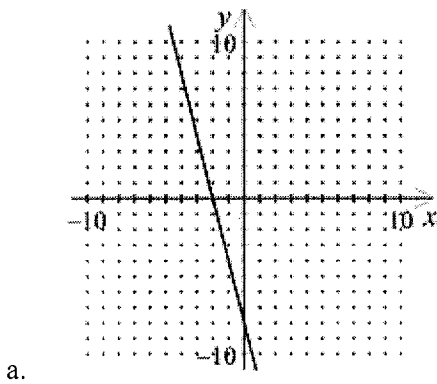
- a. 4 b. $\frac{1}{3}$ c. undefined d. 0

35. Evaluate the expression $n \times 3 + 27 \div 3$, given $n = 3$.

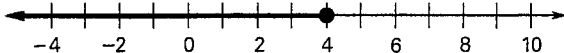
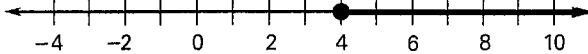
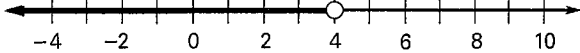
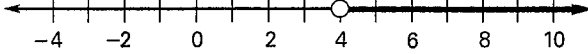
- a. 12 b. 36 c. 18 d. 30

Graph the equation.

36. $4x - 8 = 0$



Graph the solution.

- _____ 37. $x - 8 \leq -4$
- a.  A number line from -4 to 10 with tick marks every 1 unit. A solid black dot is placed at the number 4. A thick black ray extends from the dot to the left, passing through 2, 0, and -2.
- b.  A number line from -4 to 10 with tick marks every 1 unit. A solid black dot is placed at the number 4. A thick black ray extends from the dot to the right, passing through 6, 8, and 10.
- c.  A number line from -4 to 10 with tick marks every 1 unit. An open circle is placed at the number 4. A thick black ray extends from the circle to the left, passing through 2, 0, and -2.
- d.  A number line from -4 to 10 with tick marks every 1 unit. An open circle is placed at the number 4. A thick black ray extends from the circle to the right, passing through 6, 8, and 10.

_____ 38. If $20 = 4(x - 4)$, then $x - 4 =$ _____.

- a. 6 b. 20 c. 5 d. 9

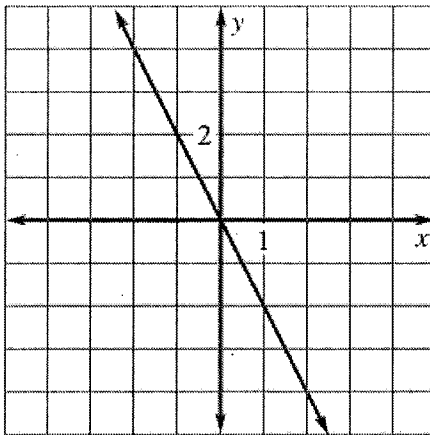
_____ 39. Use the concept of opposites to simplify $-[-(-4)]$.

- a. 4 b. $\frac{1}{4}$ c. -4 d. $-\frac{1}{4}$

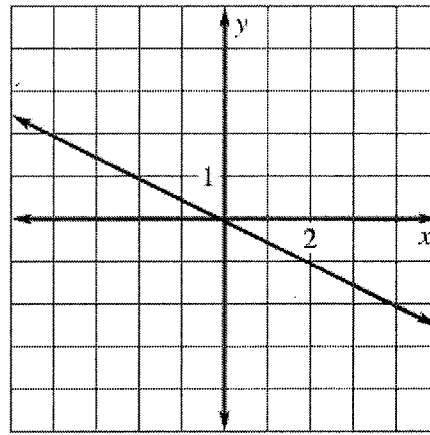
Graph:

40. $y = 2x$

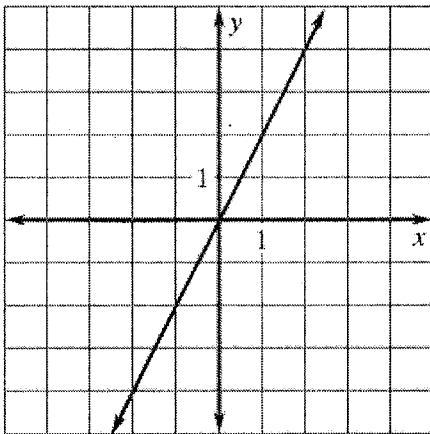
a.



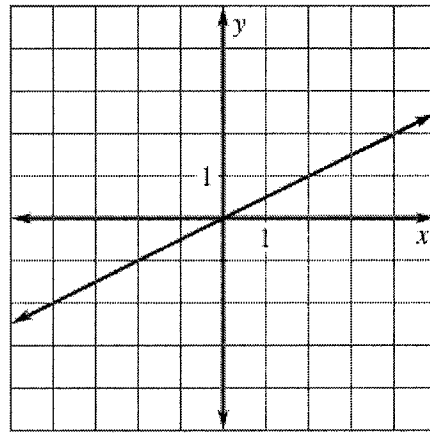
c.



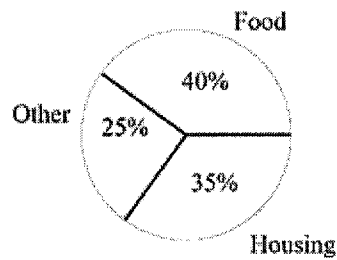
b.



d.



41. The circle graph below represents a family's monthly budget. If the total monthly income is \$1500, how much money is spent on food?



- a. \$525 b. \$400 c. \$350 d. \$600