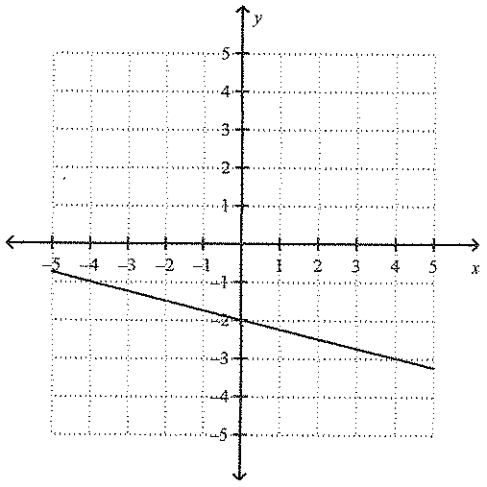
Name: _____ Class: _____ Date: _____

Algebra--Chapter 6 REVIEW

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

Find the slope of the line.

____ 1.



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

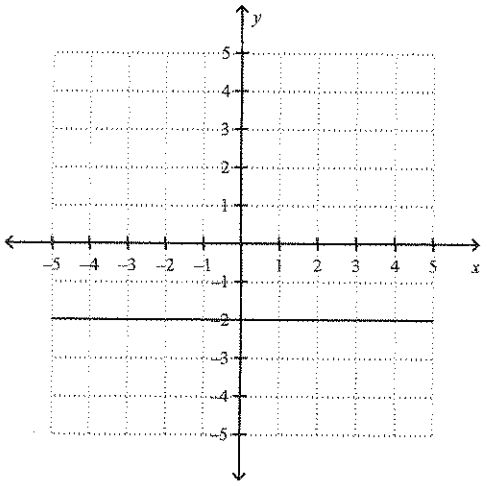
Find the slope of the line that passes through the pair of points.

____ 2. (4, 6), (9, 3)

a. $-\frac{5}{3}$ b. $\frac{3}{5}$ c. $\frac{5}{3}$ d. $-\frac{3}{5}$

State whether the slope is 0 or undefined.

____ 3.



a. undefined

b. 0

Find the slope and *y*-intercept of the line.

____ 4. $y = \frac{4}{3}x - 3$

a. $3; \frac{4}{3}$

b. $-3; \frac{4}{3}$

c. $\frac{3}{4}; 3$

d. $\frac{4}{3}; -3$

____ 5. $8x + 4y = 88$

a. $-\frac{1}{2}; 22$

b. $-2; \frac{1}{22}$

c. $2; -22$

d. $-2; 22$

Write an equation of a line with the given slope and *y*-intercept.

____ 6. $m = -4,\ b = 8$

a. $y = -4x - 8$

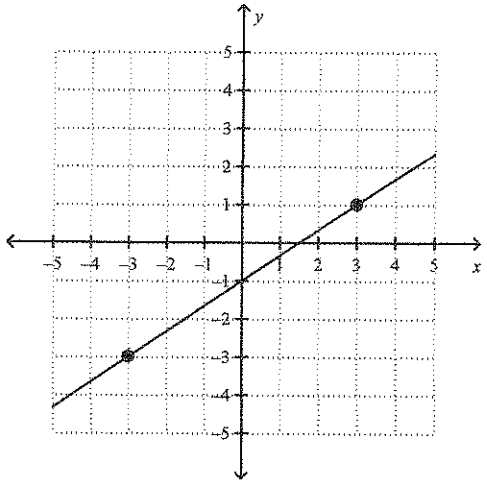
b. $y = 4x + 8$

c. $y = 8x - 4$

d. $y = -4x + 8$

Write the slope-intercept form of the equation for the line.

____ 7.



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

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

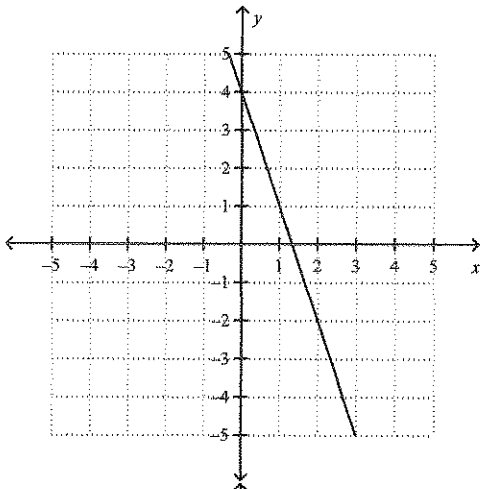
c. $y = -\frac{2}{3}x - 1$

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

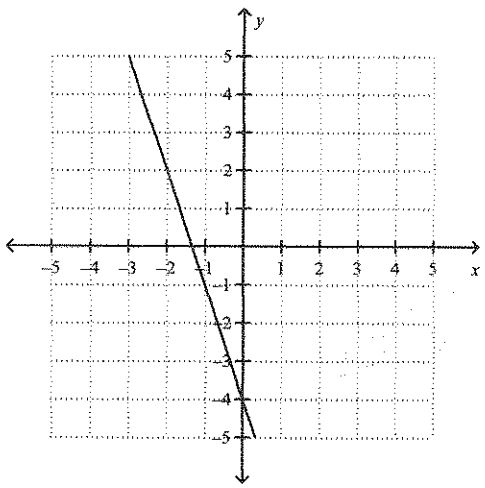
____ 8. Use the slope and y-intercept to graph the equation.

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

a.



c.



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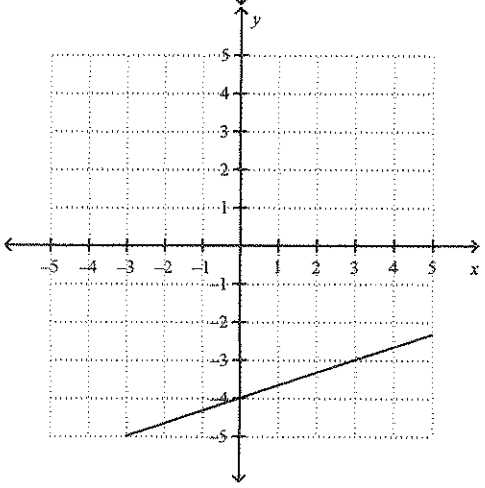
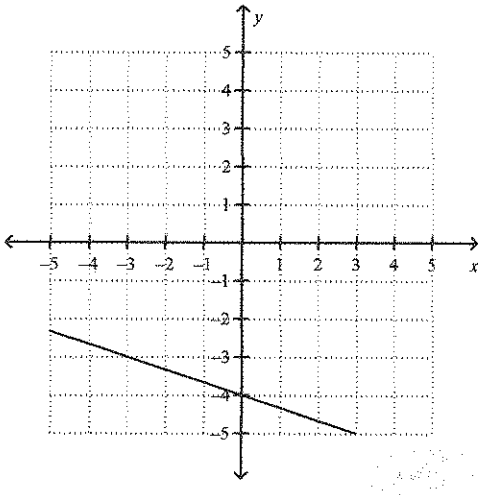


d.



Find the x- and y-intercept of the line.

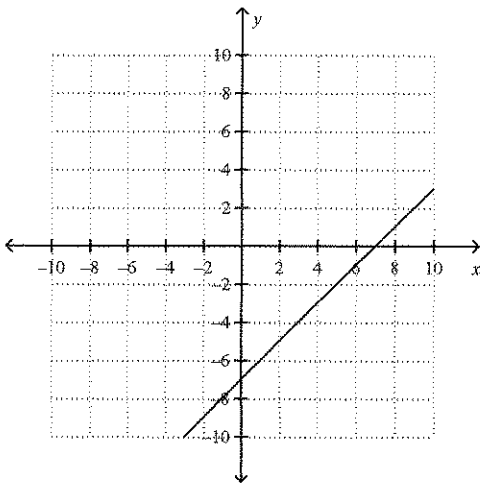
____ 9. $-3x + 9y = 18$

a. x-intercept is 2; y-intercept is –6.
b. x-intercept is –3; y-intercept is 9.
c. x-intercept is –6; y-intercept is 2.
d. x-intercept is 9; y-intercept is –3.

Match the equation with its graph.

____ 10. $-7x + 7y = -49$

a.



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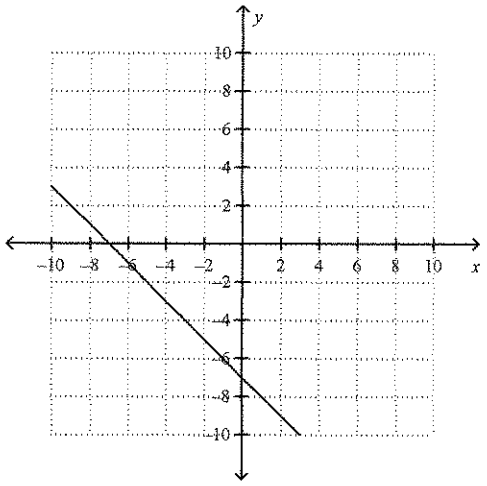

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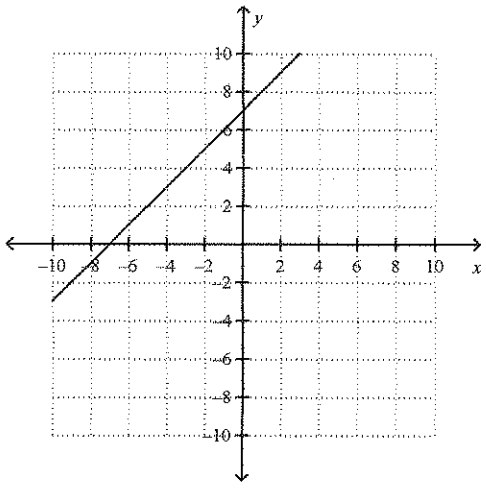

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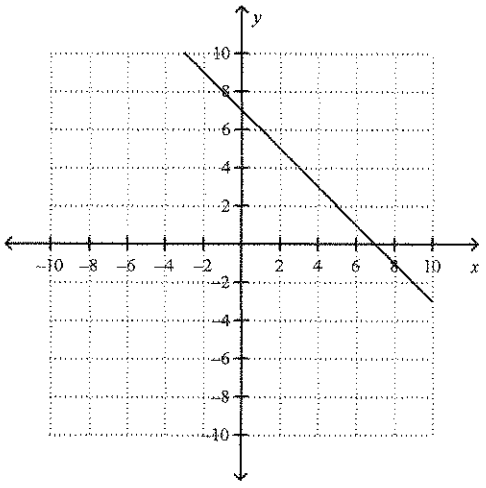


____ 11. Write $y = \frac{5}{6}x + 11$ in standard form using integers.

a. $-5x - 6y = 66$

b. $-5x + 6y = 11$

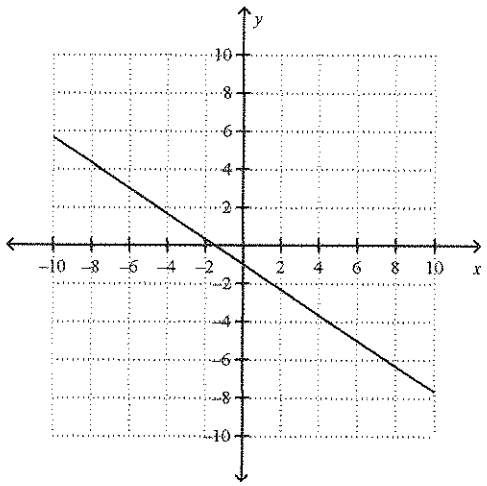
c. $6x - 5y = 66$

d. $-5x + 6y = 66$

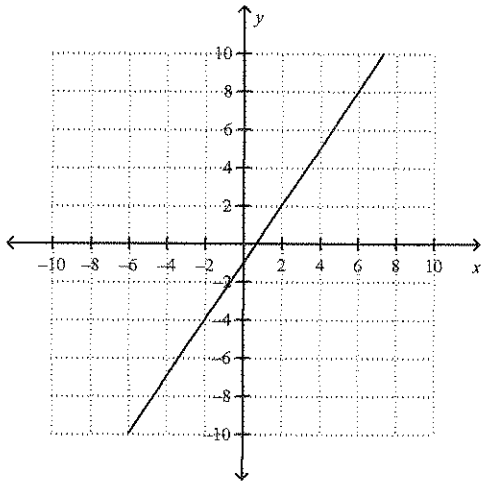
Graph the equation.

____ 12. $y - 2 = -\frac{3}{2}(x + 2)$

a.



c.



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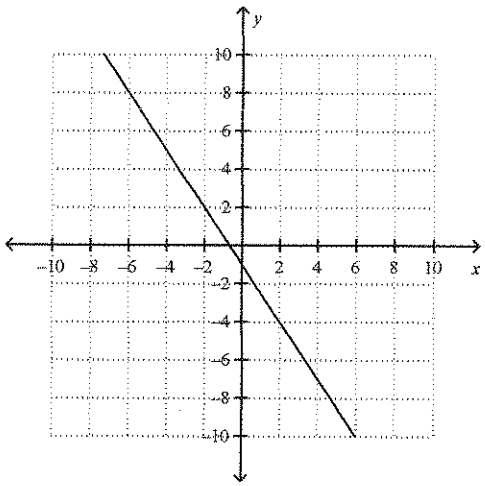

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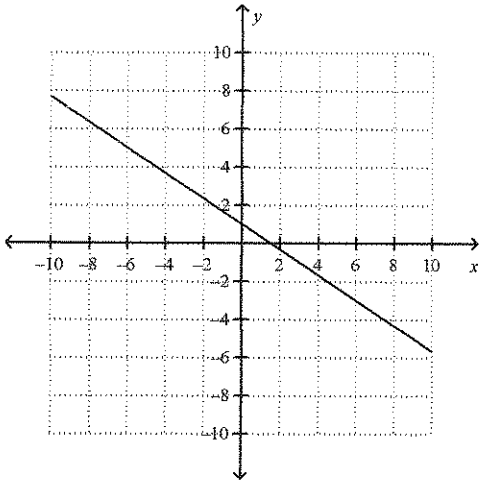
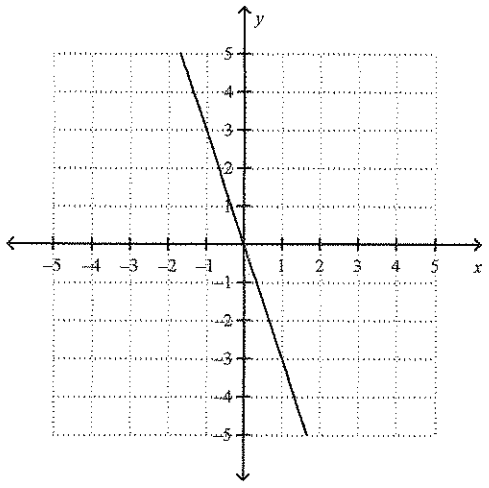
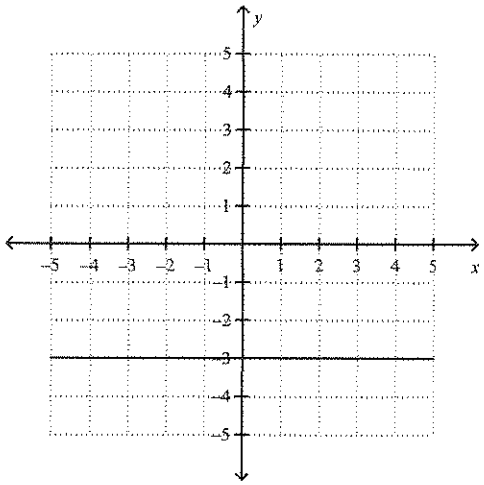


____ 13. $y = -3$

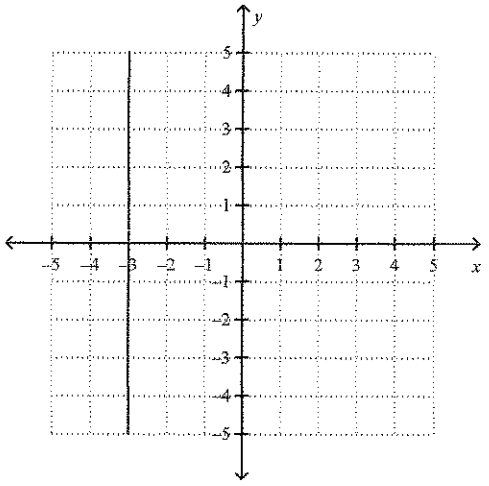
a.



c.



b.



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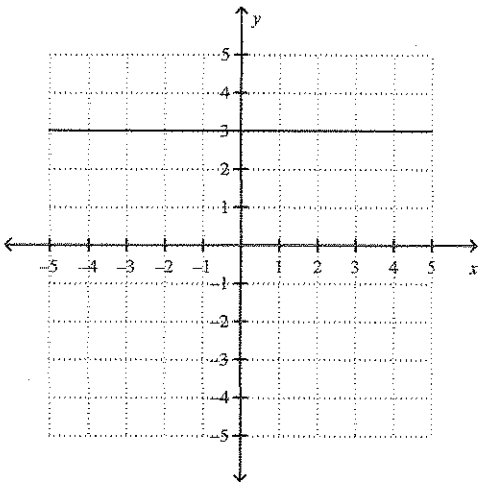


Write an equation in point-slope form for the line through the given point with the given slope.

____ 14. $(10, -9)$; $m = -2$

a. $y - 10 = -2(x + 9)$

b. $y - 9 = -2(x + 10)$

c. $y - 9 = -2(x - 10)$

d. $y + 9 = -2(x - 10)$

____ 15. A line passes through $(2, -1)$ and $(8, 4)$.

a. Write an equation for the line in point-slope form.

b. Rewrite the equation in standard form using integers.

a. $y + 1 = \frac{5}{6}(x - 2)$; $-5x + 6y = -16$

b. $y - 1 = \frac{5}{6}(x - 2)$; $-5x + 6y = 16$

c. $y + 1 = \frac{5}{6}(x + 2)$; $-5x + 6y = -16$

d. $y - 2 = \frac{5}{6}(x + 1)$; $-5x + 6y = 17$

Is the relationship shown by the data linear? If so, model the data with an equation.

____ 16.

x	y
–9	–2
–5	–7
–1	–12
3	–17

a. The relationship is linear; $y + 2 = \frac{4}{5}(x + 9)$.

b. The relationship is linear; $y + 9 = -\frac{4}{5}(x + 2)$.

c. The relationship is not linear.

d. The relationship is linear; $y + 2 = -\frac{5}{4}(x + 9)$.

Are the graphs of the lines in the pair parallel? Explain.

____ 17. $y = \frac{1}{6}x + 8$

$-2x + 12y = -11$

a. Yes, since the slope are the same and the y-intercepts are the same.
b. No, since the y-intercepts are different.
c. Yes, since the slope are the same and the y-intercepts are different.
d. No, since the slopes are different.

Write an equation for the line that is parallel to the given line and that passes through the given point.

____ 18. $y = \frac{3}{4}x - 9$; (–8, –18)

a. $y = \frac{3}{4}x + \frac{11}{2}$

b. $y = \frac{4}{3}x - 12$

c. $y = \frac{3}{4}x - 12$

d. $y = -\frac{4}{3}x + 12$

Tell whether the lines for each pair of equations are *parallel*, *perpendicular*, or *neither*.

____ 19. $y = -\frac{1}{2}x - 11$

$16x - 8y = -8$

a. neither b. perpendicular c. parallel

Write the equation of a line that is perpendicular to the given line and that passes through the given point.

____ 20. $4x - 12y = 2$; $(10, -1)$

a. $y = 3x + 29$

b. $y = -\frac{1}{3}x + 29$

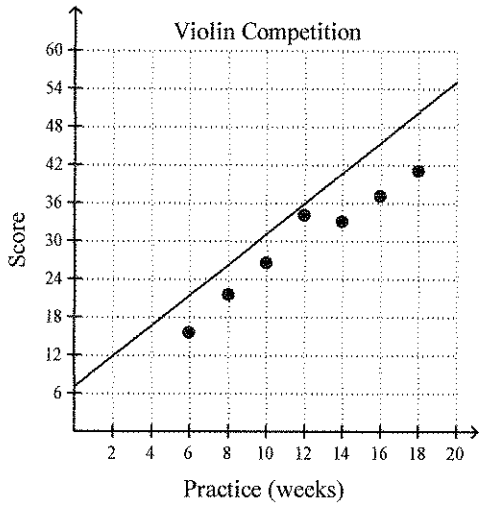
c. $y = -3x + 29$

d. $y = -\frac{1}{3}x + 7$

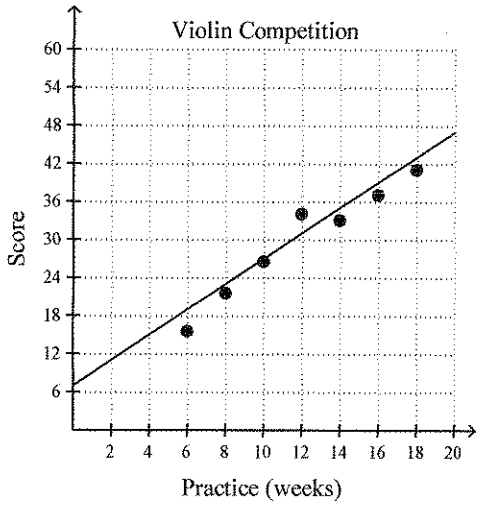
____ 21. Which graph shows the best trend line for the following data.

Practice (weeks)	6	8	10	12	14	16	18
Score	15.5	21.5	26.5	34	33	37	41

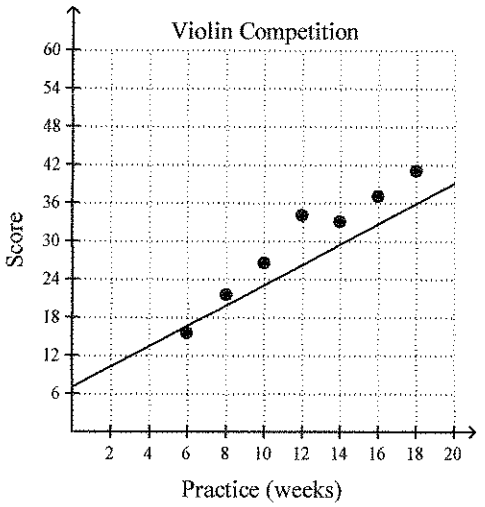
a.



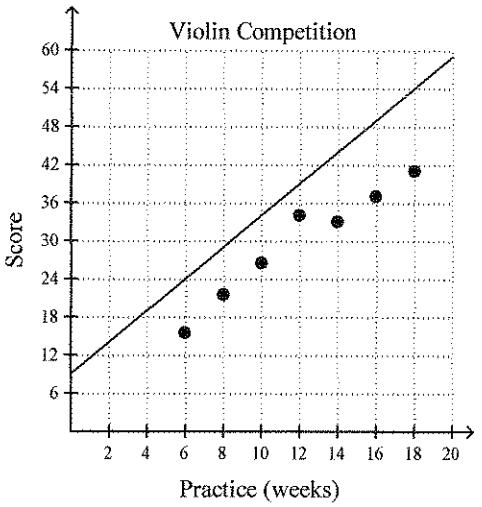
c.



b.

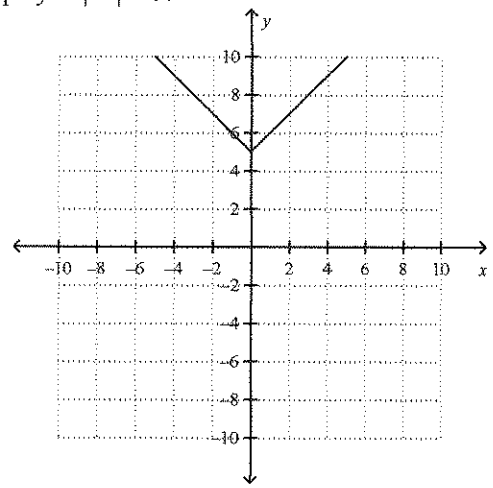


d.

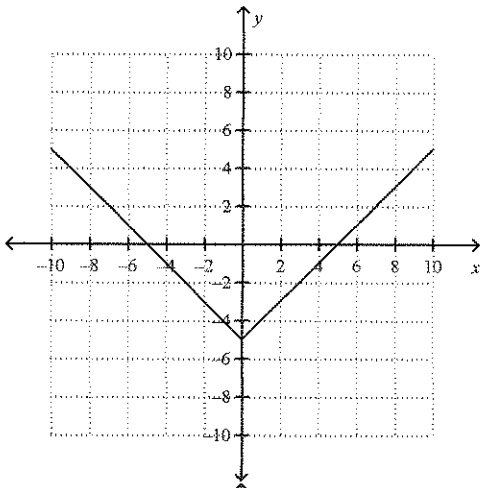


____ 22. Graph $y = |x| - 5$.

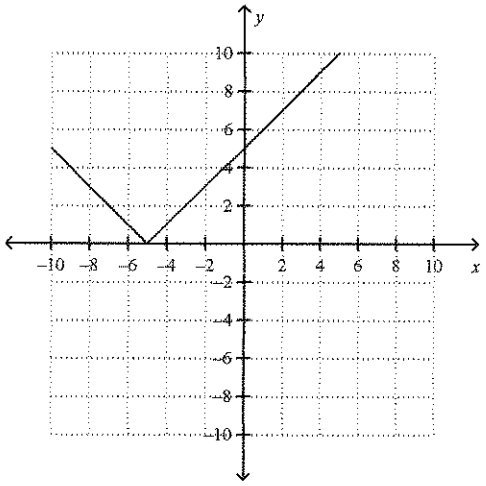
a.



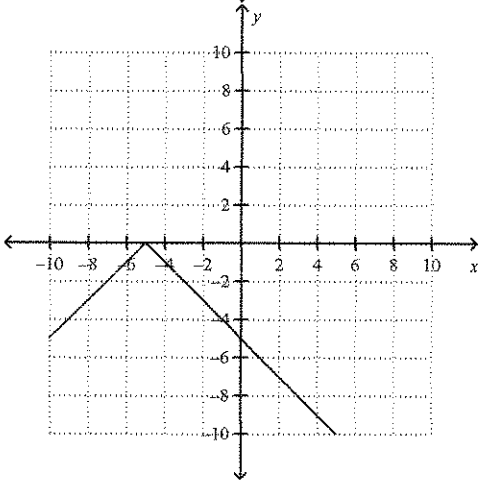
c.



b.



d.



Write an equation for each translation of $y = |x|$.

____ 23. 2 units up

a. $y = |x| - 2$
b. $y + 2 = |x|$
c. $y = |2x|$
d. $y = |x| + 2$

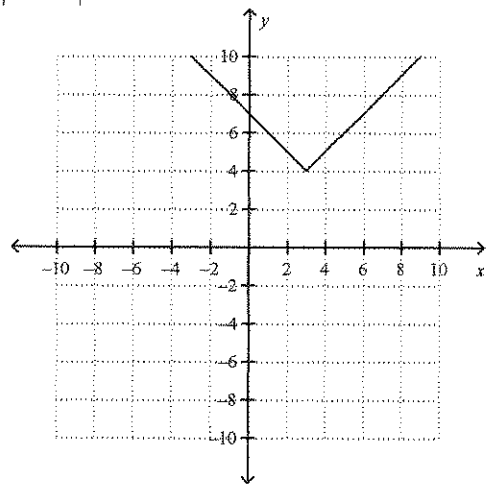
____ 24. 16.5 units right

a. $y = |x - 16.5|$
b. $y = |x| + 16.5$
c. $y = |x| - 16.5$
d. $y = |x + 16.5|$

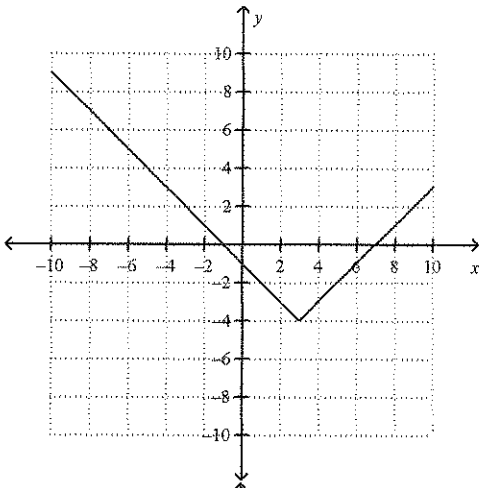
Graph each equation by translating $y = |x|$.

____ 25. $y = |x - 3| - 4$

a.



c.



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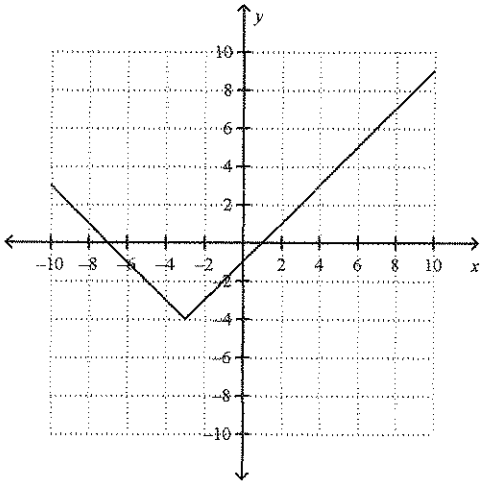

d.