

**Chapter  
1****Maintaining Mathematical Proficiency****Add or subtract.**

1.  $-1 + (-3)$

2.  $0 + (-12)$

3.  $5 - (-2)$

4.  $-4 - 7$

5. Find two pairs of integers whose sum is  $-6$ .6. In a city, the record monthly high temperature for March is  $56^{\circ}\text{F}$ . The record monthly low temperature for March is  $-4^{\circ}\text{F}$ . What is the range of temperatures for the month of March?**Multiply or divide.**

7.  $-2(13)$

8.  $-8 \cdot (-5)$

9.  $-14 \div 2$

10.  $-30 \div (-3)$

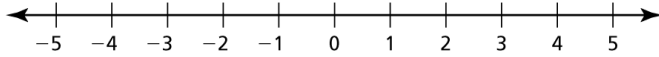
11. Find two pairs of integers whose product is  $-20$ .

12. A football team loses 3 yards in 3 consecutive plays. What is the total yardage gained?

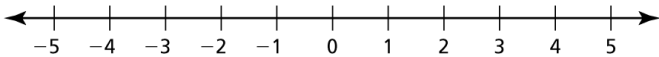
**Chapter  
2****Maintaining Mathematical Proficiency**

Graph the number.

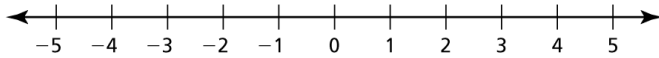
1.  $|-2|$



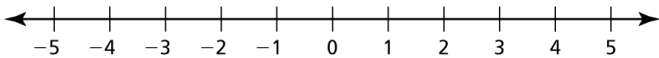
2.  $-3 + |-3|$



3.  $-1 - |-4|$



4.  $2 + |2|$

Complete the statement with  $<$ ,  $>$ , or  $=$ .

5.  $6$  \_\_\_\_\_  $5$

6.  $-2$  \_\_\_\_\_  $3$

7.  $-4$  \_\_\_\_\_  $-7$

8.  $-8$  \_\_\_\_\_  $-5$

9.  $|-5|$  \_\_\_\_\_  $5$

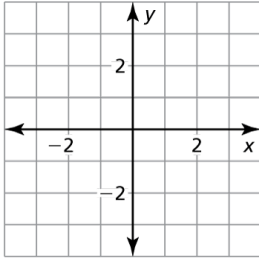
10.  $-7$  \_\_\_\_\_  $|-6|$

11. A number  $a$  is to the right of a number  $b$  on the number line. Which is greater,  $-a$  or  $-b$ ?12. A number  $a$  is to the left of a number  $b$  on the number line. Which is greater,  $|-a|$  or  $|-b|$ ?

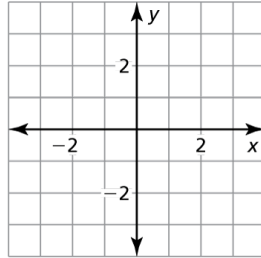
# Chapter 3 Maintaining Mathematical Proficiency

Plot the point in a coordinate plane. Describe the location of the point.

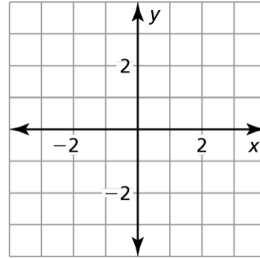
1.  $A(-3, 1)$



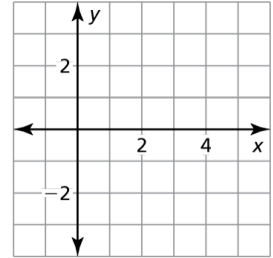
2.  $B(2, 2)$



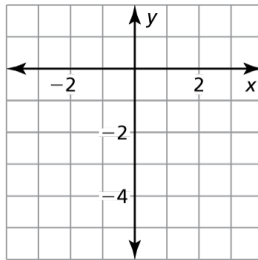
3.  $C(1, 0)$



4.  $D(5, 2)$



5. Plot the point that is on the y-axis and 5 units down from the origin.



Evaluate the expression for the given value of  $x$ .

6.  $2x + 1; x = 3$

7.  $16 - 4x; x = -4$

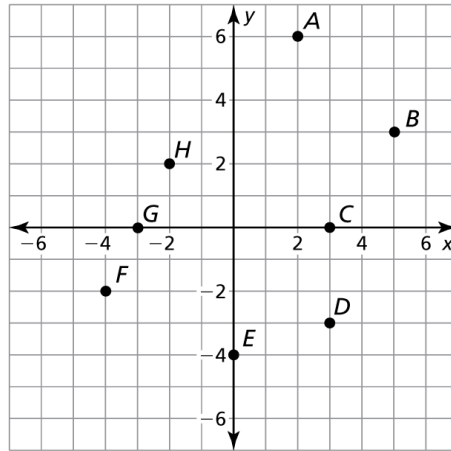
8.  $12x + 7; x = -2$

9.  $-9 - 3x; x = 5$

10. The length of a side of a square is represented by  $(24 - 3x)$  feet. What is the length of the side of the square when  $x = 6$ ?

**Chapter  
4****Maintaining Mathematical Proficiency**

Use the graph to answer the question.



1. What ordered pair corresponds to point  $A$ ?
2. What ordered pair corresponds to point  $H$ ?
3. What ordered pair corresponds to point  $E$ ?
4. Which point is located in Quadrant III?
5. Which point is located in Quadrant IV?
6. Which point is located on the negative  $x$ -axis?

Solve the equation for  $y$ .

7.  $x - y = -12$

8.  $8x + 4y = 16$

9.  $3x - 5y + 15 = 0$

10.  $0 = 3y - 6x + 12$

11.  $y - 2 = 3x + 4y$

12.  $6y + 3 - 2x = x$

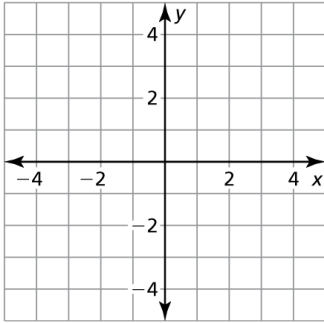
13. Rectangle  $ABCD$  has vertices  $A(4, -2)$ ,  $B(4, 5)$ , and  $C(7, 5)$ . What are the coordinates of vertex  $D$ ?

**Chapter 5**

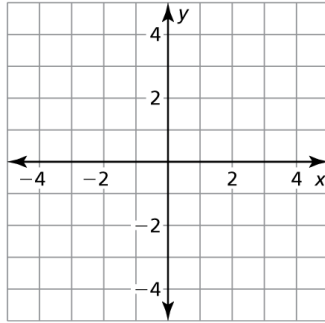
**Maintaining Mathematical Proficiency**

Graph the equation.

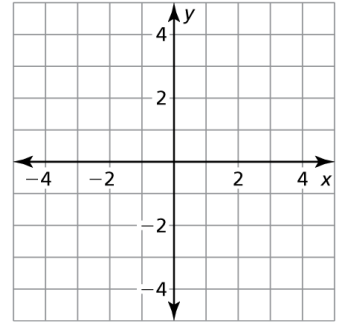
1.  $y + 2 = x$



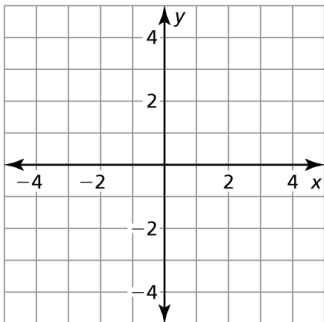
2.  $2x - y = 3$



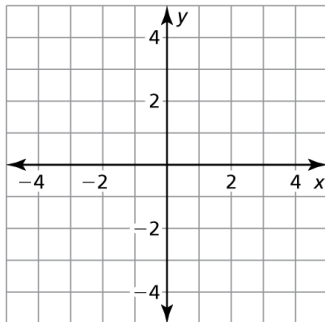
3.  $5x + 2y = 10$



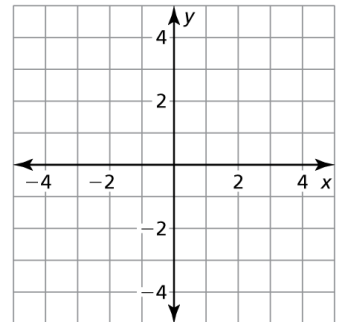
4.  $y - 3 = x$



5.  $3x - y = -2$

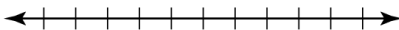


6.  $3x + 4y = 12$

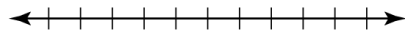


Solve the inequality. Graph the solution.

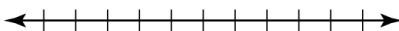
7.  $a - 3 > -2$



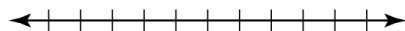
8.  $-4 \geq -2c$



9.  $2d - 5 < -3$



10.  $8 - 3r \leq 5 - 2r$



**Chapter  
6****Maintaining Mathematical Proficiency**

Evaluate the expression.

1.  $(14 + 20 - 6) \div 4 - 6^2$     2.  $(8 + 4)^2 + (13 - 10 \div 5)$     3.  $8 \div 4 \bullet 19 + 18 + 13$

4.  $3 \bullet 14 \bullet 11 + 4^2 + 19$     5.  $(21 + 2)(14 - 6) + 3^2$     6.  $7(3 \bullet 10 - 4^2) + 8$

Find the square root(s).

7.  $\sqrt{36}$

8.  $-\sqrt{49}$

9.  $-\sqrt{225}$

10.  $\sqrt{144}$

11.  $\sqrt{169}$

12.  $\sqrt{9}$

13.  $-\sqrt{16}$

14.  $\pm\sqrt{256}$

Write an equation for the  $n$ th term of the arithmetic sequence.

15. 1, 5, 9, 13, ...

16. 21, 15, 9, 3, ...

17. -2, 1, 4, 7, ...

18. 8, 6, 4, 2, ...

19. -10, -4, 2, 8, ...

20. 16, 8, 0, -8, ...

**Chapter  
7****Maintaining Mathematical Proficiency****Simplify the expression.**

1.  $5x - 6 + 3x$

2.  $3t + 7 - 3t - 4$

3.  $8s - 4 + 4s - 6 - 5s$

4.  $9m + 3 + m - 3 + 5m$

5.  $-4 - 3p - 7 - 3p - 4$

6.  $12(z - 1) + 4$

7.  $-6(x + 2) - 4$

8.  $3(h + 4) - 3(h - 4)$

9.  $7(z + 4) - 3(z + 2) - 2(z - 3)$

**Find the greatest common factor.**

10. 24, 32

11. 30, 55

12. 48, 84

13. 28, 72

14. 42, 60

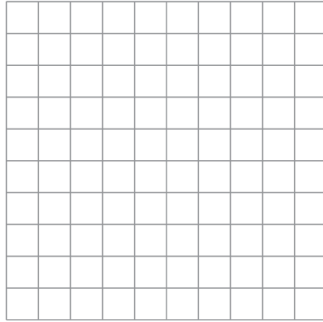
15. 35, 99

16. Explain how to find the greatest common factor of 42, 70, and 84.

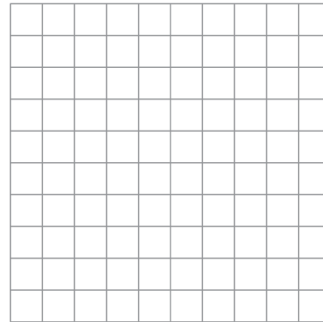
**Chapter  
8****Maintaining Mathematical Proficiency**

Graph the linear equation.

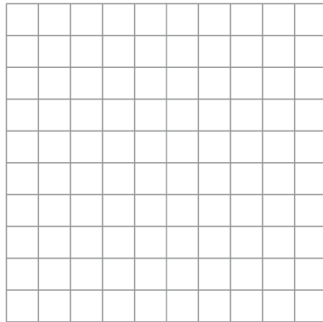
1.  $y = 4x - 5$



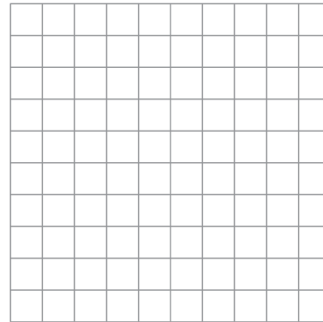
2.  $y = -2x + 3$



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



4.  $y = -x + 2$

Evaluate the expression when  $x = -4$ .

5.  $2x^2 + 8$

6.  $-x^2 + 3x - 4$

7.  $-3x^2 - 4$

8.  $5x^2 - x + 8$

9.  $4x^2 - 8x$

10.  $6x^2 - 5x + 3$

11.  $-2x^2 + 4x + 4$

12.  $3x^2 + 2x + 2$