

Practice

For use with pages 5-9

Evaluate the expression when $y = 6$.

1. $\frac{24}{y}$

2. $5y$

3. $20 - y$

4. $19 + y$

5. $y + 13$

6. $54 - y$

7. $7y$

8. $\frac{36}{y}$

Evaluate the expression when $m = 7$, $n = 9$, and $q = 10$.

9. nq

10. $\frac{18}{n}$

11. $m + q$

12. $29 - m$

13. $58 - m$

14. $41 + n$

15. $16q$

16. $\frac{36}{n}$

17. You are dividing 130 students into g equally sized groups for a field trip. Write a variable expression to find the number of students in each group.

1.2**Practice**

For use with pages 10-13

Write the product using an exponent.

1. $43 \cdot 43 \cdot 43 \cdot 43$

2. $100 \cdot 100 \cdot 100$

3. $x \cdot x \cdot x$

4. $p \cdot p \cdot p \cdot p \cdot p$

Evaluate the expression when $n = 8$ and $n = 0.3$.

5. n^2

6. n^3

7. n^4

8. n^6

9. n^8

10. n^7

Write the power in words and as a repeated multiplication. Then evaluate the power.

11. 9^6

12. 16^4

13. 2.5^4

14. 1.4^3

Evaluate the expression when $x = 0.64$ and $y = 15$.

15. x^3

16. x^2

17. x^1

18. y^3

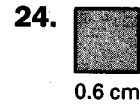
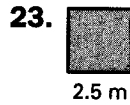
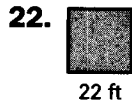
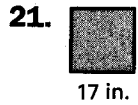
19. y^4

20. y^5

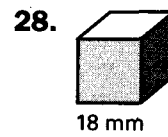
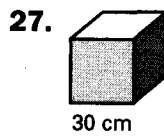
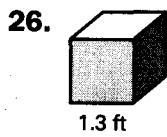
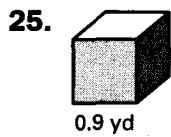
Practice

For use with pages 10-13

Find the area of the square.



Find the volume of the cube.



29. Compare each number in the top row of the table with the number below it. Describe any pattern you see. Complete the table with a variable expression involving n .

1	2	3	4	...	n
1	16	81	256	...	

Practice

For use with pages 16–21

Evaluate the expression.

1. $6.1(4) + 2(1.5)$

2. $58.4 - 4(9.2)$

3. $\frac{2.6 + 3.9}{7.8 - 7.3}$

4. $\frac{42 - 17}{0.2(25)}$

5. $7(16 - 2^3)$

6. $9(3 + 5^3)$

7. $2.5[10 + (20 - 2^2)]$

8. $3.1[100 - (5^2 \cdot 3)]$

9. $90 \div [(82 - 77) \cdot 9]$

10. Find the sum of 2 cubed and 3 squared.

11. Find the difference of 10 squared and 9 squared.

Evaluate the expression when $a = 16$, $b = 8$, and $c = 7$.

12. $8c \div 4$

13. $(c + 5) \div 6$

14. $3a + 2.1(4)$

15. $\frac{2a}{15 - c}$

16. $7.2b - bc$

17. $b(a - 9.1)$

18. $ac[(99 - b^2) \cdot 2]$

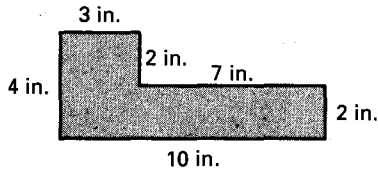
19. $c^3[4.1(3c - 19)]$

20. $\frac{b^3(9 - 5.9)}{3.2(20.4 - 12.4)}$

Practice

For use with pages 16-21

21. The formula to find the area A of a rectangle is $A = \ell w$, where ℓ is the length of the rectangle and w is the width of the rectangle. The figure below can be divided into two rectangles. Find the total area of the figure.



22. You complete a project for your social studies class. There are 3 parts to the project, worth a total of 100 points. You get 50 out of 50 points on part A, and 23 out of 25 points on part C. The total score you received is 93 out of 100. How many points did you get on part B?
23. You use a long distance telephone service that charges \$.99 for the first minute of a long distance call and \$.10 for each additional minute. Write and evaluate an expression for the total cost of a 17-minute long distance phone call.

Practice

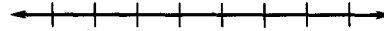
For use with pages 22–26

Graph the integers on a number line. Then write the integers in order from least to greatest.

1. $-14, -11, -13, -9, -20, -7$



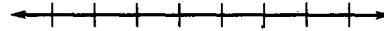
2. $-30, 20, 10, -15, -5, 35$



3. $0, -1, 1, -2, 2, -3, 3$



4. $40, -50, 60, 20, -30, -10$



Complete the statement using $<$ or $>$.

5. -9 ___ -17

6. -20 ___ -12

7. 15 ___ -18

8. 0 ___ -24

9. -32 ___ 21

10. 27 ___ -14

State the absolute value of the number.

11. -73

12. -80

13. 16

14. 106

15. -34

16. -54

State the opposite of the number.

17. -98

18. -77

19. 45

20. 70

21. 63

22. -23

1.4

Continued

Practice

For use with pages 22-26

Evaluate the expression when $x = -7$.

23. $|-x|$

24. $|x| + 4$

25. $2|x|$

26. $6|x|$

27. $|x| - 5$

28. $|x| + 14$

29. $-x - 3$

30. $-x + 10$

31. The table shows the daily low temperatures recorded over a seven-day period in a town.

Day	Temperature
Sunday	-10°C
Monday	-5°C
Tuesday	-11°C
Wednesday	-10°C
Thursday	-6°C
Friday	-7°C
Saturday	-9°C

- a. Did the daily low temperature *increase* or *decrease* from Tuesday to Wednesday?
- b. Did the daily low temperature *increase* or *decrease* from Thursday to Saturday?
- c. Which day's low temperature was lowest? Which was highest?

Practice

For use with pages 28–33

Tell whether the sum is positive or negative. You do not need to find the sum.

1. $-27 + (-16)$

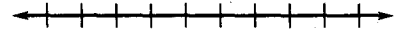
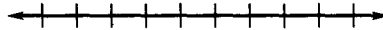
2. $-18 + 75$

Use a number line to find the sum.

3. $-15 + (-4)$

4. $-21 + (-5)$

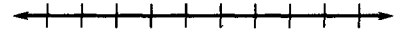
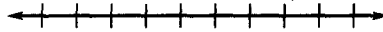
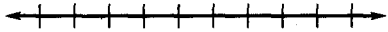
5. $-6 + 35$



6. $-42 + 10$

7. $11 + (-47)$

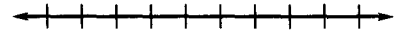
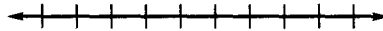
8. $9 + (-53)$



9. $-106 + (-3)$

10. $-94 + (-1)$

11. $81 + (-7)$



Find the sum.

12. $-41 + 30$

13. $-15 + 27$

14. $-21 + (-34)$

15. $-51 + (-23)$

16. $61 + (-33)$

17. $29 + (-48)$

18. $64 + (-17)$

19. $91 + (-26)$

20. $-46 + (-75)$

21. $-9 + 12 + (-4)$

22. $-22 + (-13) + 6$

23. $55 + (-26) + 47$

Practice

For use with pages 28–33

Evaluate the expression when $a = 8$ and $b = -14$.

24. $a + (-23)$

25. $-a + b$

26. $-72 + b$

27. $b + 39$

28. $a + (-b)$

29. $-61 + a$

30. The temperature at 6 A.M. is -10° Fahrenheit. During the day, the temperature rises 6°F , drops 3°F , rises 2°F , and drops 8°F . Write an integer to represent each value. What is the temperature after these changes?

31. The table shows incomes and expenses for a small music store in one week. Write an integer to represent each value. Then find the net profit for the week.

Income		Expense	
Instruments	\$800	Displays	\$110
Sheet music	\$100	Salaries	\$400
Lessons	\$150		

Practice

For use with pages 34–38

Find the difference.

1. $7 - 11$

2. $15 - 26$

3. $4 - (-20)$

4. $13 - (-8)$

5. $-12 - 9$

6. $-19 - 28$

7. $-2 - (-24)$

8. $-18 - (-5)$

9. $-21 - (-6)$

Evaluate the expression when $x = -14$ and $y = -3$.

10. $x - y$

11. $29 - x$

12. $x - (-17)$

13. $-27 - y$

14. $y - 18$

15. $x - (-23)$

16. $x - 4 - 9$

17. $15 - y - 7$

18. $31 - 35 - y$

1.6

Continued

Practice

For use with pages 34–38

Find the change in temperature or elevation.19. From -16°C to 23°C 20. From -47°C to -38°C 21. From 9°F to -12°F 22. From -16°F to -27°F 23. From -64 meters to -40 meters24. From -20 meters to 50 meters25. From 120 yards to -45 yards26. From -16 feet to -32 feet27. Find the value of the expression $-9 - (-4) - 6$.28. Find the value of the expression $102 - (-7) - 270$.

29. A group of hikers on a mountain began at an elevation of 3040 feet above sea level and stopped at an elevation of 2319 feet above sea level. What was their change in elevation between these points? How can you tell from the change in elevation whether the hikers were going up or down the mountain?

30. The temperature at 6 A.M. was 63°F . At 3 P.M., the temperature was 41°F . What was the change in temperature?

Practice

For use with pages 41-46

Tell whether the product or quotient is *positive* or *negative*. You do not need to find the product or quotient.

1. $16(-23)$

2. $\frac{-72}{9}$

3. $-26(-17) \div 13$

Find the product or quotient.

4. $25(-5)$

5. $-29(-4)$

6. $-124 \div 31$

7. $98 \div (-14)$

8. $\frac{-102}{-17}$

9. $-32(9)$

10. $-42(-6)$

11. $201 \div (-67)$

12. $-612 \div (-18)$

13. $\frac{252}{-4}$

14. $-19(7)$

15. $-21(-11)$

Simplify.

16. $-15(16)(4)$

17. $20(-13)(-32)$

18. $-220 \div 11 \div (-4)$

19. $140 \div (-7) \div (-5)$

20. $24(-8) \div (-6)$

21. $\frac{-9(27)}{3}$

1.7

Continued

Practice

For use with pages 41-46

Without performing the indicated divisions, complete the statement using $>$, $<$, or $=$.

22. $-642 \div 214$ _____ $-170 \div (-10)$

23. $-344 \div (-86)$ _____ $-796 \div 199$

24. Evaluate the expression $\frac{5y}{6}$ when $y = 18$.

25. Evaluate the expression $\frac{-2m}{9}$ when $m = 27$.

26. The table shows the lowest windchill temperature for each day recorded over two weeks. Find the mean lowest windchill temperature.

Day	Windchill (in °C)	Day	Windchill (in °C)
1	-4	8	-4
2	-5	9	-6
3	-7	10	-2
4	-3	11	-4
5	-3	12	-6
6	-6	13	-10
7	-1	14	-9

Practice

For use with pages 47-51

Give the coordinates of the point.

1. X

2. Y

3. Z

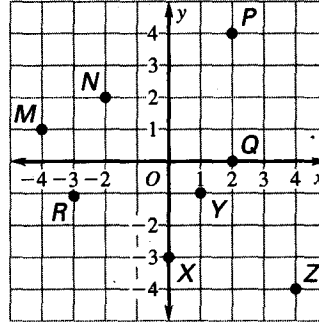
4. M

5. N

6. P

7. Q

8. R



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

9. $(-7, 6)$

10. $(-5, -3)$

11. $(2, 3)$

12. $(5, 2)$

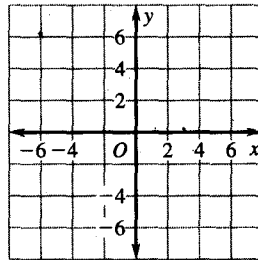
13. $(-4, 0)$

14. $(3, -6)$

15. $(-2, 1)$

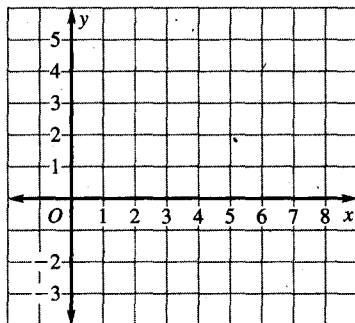
16. $(5, 0)$

17. $(0, -2)$



18. Use a coordinate plane.

- a. Plot the points $(0, 0)$, $(0, 4)$, $(5, 4)$, $(8, 2)$, and $(5, 0)$. Connect the points in order. Connect the last point to the first point.



- b. Identify the figure. Explain your reasoning.

Practice

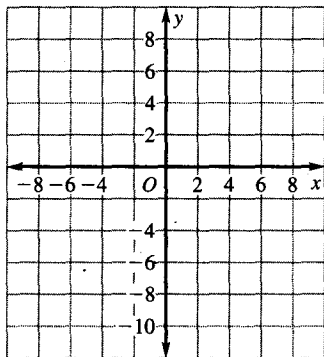
For use with pages 47-51

19. Use the variable expression $3x - 1$.

a. Evaluate the expression when $x = -3, -2, -1, 0, 1, 2,$ and 3 .

b. Use your results from part (a) to write a list of ordered pairs in the form $(x, 3x - 1)$.

c. Plot the ordered pairs $(x, 3x - 1)$ from part (b) in a coordinate plane.



d. Describe what you notice about the points.

20. The table shows the number of women who finished the New York City Marathon from 1997 to 2001.

Year	1997	1998	1999	2000	2001
Women Finishers	8413	8332	9160	8332	6853

a. Make a scatter plot of the data.

b. Describe any relationship you see.

