

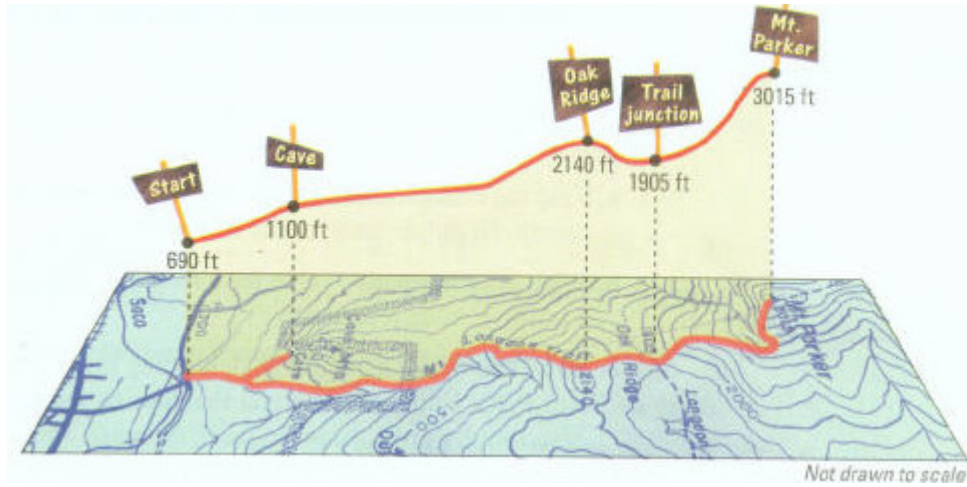
## Chapter 2 Review

- Write the numbers in increasing order: 4.66, 0.7, 4.6, -1.8, 3, -0.66
- Write the numbers in increasing order:  $7, -\frac{1}{2}, 2.4, -\frac{3}{4}, -5.8, \frac{1}{3}$
- Find the opposite of the number -2.5.
- Find the opposite of the number  $3\frac{4}{5}$ .
- Decide whether the statement is *true* or *false*. If it is false, give a counterexample.
  - "The opposite of  $-a$  is always positive."
  - "The opposite of  $|a|$  is never positive."
- Use the table, which lists several players and their final scores at a 1998 Ladies Professional Golf Association tournament. In golf the total score is given as the number of strokes above or below *par*, the expected score. If you are at "even par," your score is zero. The player with the lowest score wins.
  - Which player scored closest to par?
  - Which player scored farthest from par?
  - Which players scored above par?
  - Which players scored below par?
  - One of the players listed above won the tournament. Who was it?
- Find the sum
  - $-4 + 6$
  - $-13 + (-6)$
  - $-11.6 + 6.4 + (-3.0)$
- Name the property that makes the statement true
  - $(-4 + 3) + 1 = -4 + (3 + 1)$
  - $2 + (-3) = -3 + 2$

Player	Score
Luciana Bemvenuti	+6
Liz Early	+15
Michelle Estill	-9
Hiroshi Kobayashi	+1
Jenny Lidback	-4
Joan Pitcock	-11
Nancy Scranton	+4
Annika Sorenstam	-19

9. Evaluate the expression for the given value of  $x$   
 $-11 + (-2) + 11 + x$ ;  $x = -10$

10. Use the diagram to the right. It shows the elevation above sea level (in feet) of various points along the Mount Langdon Trail in the White Mountains National Forest in New Hampshire.



- How much higher is the cave than the start of the trail?
- Determine the change in elevation from each point to the next in the diagram.
- You hike along the trail, visit a cave, and then climb Oak Ridge. From there you reach a trail junction and continue to the top of Mt. Parker. Find the total of these changes to determine your overall change in elevation.

11. Evaluate the expression.

- $2 - (-4) - 7$
- $6 - 1 + 10 - (-8)$
- $8.4 - 5.2 - (-4.7)$
- $-\frac{4}{9} - \frac{2}{3} + \left(-\frac{5}{6}\right)$

12. Find the terms of the expression  $a + 3b - 5$

13. Evaluate the function  $y = -x + 13 - x$  for these values of  $x$ :  $-2$ ,  $-1$ ,  $0$ , and  $1$ .  
 Organize your results in a table.

14. Find the sum of the matrices

$$\begin{bmatrix} 1 & -2 & 2 \\ 0 & -3 & 4 \end{bmatrix} + \begin{bmatrix} 3 & -4 & 5 \\ -8 & 1 & 6 \end{bmatrix}$$

15. Find the sum of the matrices

$$\begin{bmatrix} 6.2 & -1.2 \\ -2.5 & -4.4 \\ 3.4 & -5.8 \end{bmatrix} + \begin{bmatrix} 1.5 & 9.2 \\ 6.6 & -2.2 \\ 5.7 & -7.1 \end{bmatrix}$$

16. Find the difference of the matrices

$$\begin{bmatrix} -4 & 1 \\ 0 & -13 \\ 2 & -8 \end{bmatrix} - \begin{bmatrix} -6 & 3 \\ -5 & 8 \\ 2 & -7 \end{bmatrix}$$

17. Find the product  $|(-12)(2)|$ .

18. Simplify the variable expression

a.  $-(-b)^3$

b.  $|(8)(-z)(-z)(-z)|$

c.  $-\frac{3}{7}(-w^2)(7w)$

19. Evaluate the expression  $4a + a^2$  when  $a = -7$ .

20. Your aunt lends you \$175 to buy a guitar. She will decrease the amount you owe by \$25 for each day you help her by doing odd jobs.

a. Write a verbal model that you can use to find the decrease in the amount you owe your aunt depending on the number of days you help her out.

b. What is the change in the amount you owe your aunt after helping her out for 5 days? How much do you still owe her?

21. Multiply the matrix by the real number.

$$-7 \begin{bmatrix} 6 & -4 & 3 \\ -1 & 2^2 & -9 \end{bmatrix}$$

22. Use the distributive property to rewrite the expression without parentheses.

a.  $(w + 6)^4$

b.  $-9(-t - 3)$

c.  $(6 - 3w)(-w^2)$

d.  $5\left(\frac{1}{2}x - \frac{2}{3}\right)$

23. Apply the distributive property. Then simplify by combining like terms.

a.  $(3y + 1)(-2) + y$

b.  $4w^2 - w(2w - 3)$

c.  $-x^3 + 2x(x - x^2)$

24. You and a friend decide to leave a 15% tip for restaurant service. You compute the tip  $T$ , as  $T = 0.15C$ , where  $C$  represents the cost of the meal. Your friend claims that an easier way to mentally compute the tip is to calculate 10% of the cost of the meal plus one half of 10% of the cost of the meal.

a. Write an equation that represents your friend's method of computing the tip.

b. Simplify the equation. What property did you use to simplify the equation?

c. Will both methods give the same result? Explain.

25. Simplify the expression.

a.  $-90 \div \left(-\frac{2}{3}\right)$

b.  $-12.6 \div 1.8$

c.  $6t \div \left(-\frac{1}{2}\right)$

d.  $-\frac{2b}{7} \div \frac{7}{9}$

e.  $-7 \cdot \left(-\frac{2w}{-7}\right)$

f.  $\frac{18x - 9}{3}$

g.  $\frac{-56 + x}{-8}$

26. Kareem Abdul-Jabbar scored 38,387 points and grabbed 17,440 rebounds in 1560 National Basketball Association games. How many points did he average per game? How many rebounds did he average per game? (Round your answers to the nearest tenth.)

27. Find the odds of randomly choosing the letter "S" from a bag that contains the letters in the state name MISSISSIPPI.
28. Find the probability of randomly choosing a red marble from a bag of 20 total red and white marbles where 7 of the marbles are white.
29. Use the table to the right which shows the number of earthquakes of magnitude 4.0 or greater in the western United States since 1900. The magnitude of an earthquake indicates its severity.

- a. What is the probability that the magnitude of an earthquake is from 6.0 to 6.9?
- b. What is the probability that the magnitude of an earthquake is *not* from 4.0 to 4.9?
- c. What are the odds that the magnitude of an earthquake is from 7.0 to 7.9?

Magnitude	Number of earthquakes
8 and higher	1
7.0-7.9	18
6.0-6.9	129
5.0-5.9	611
4.0-4.9	3171