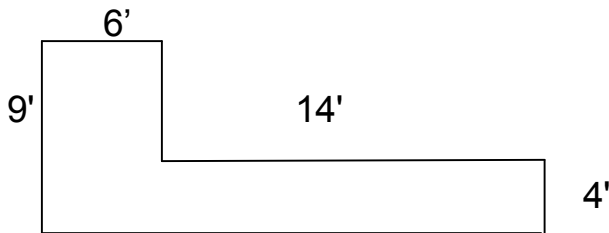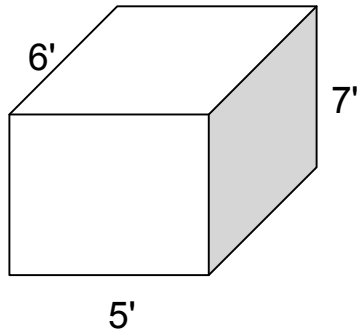# Chapter 1 Review

1. State in proper mathematics vocabulary the properties of addition.

2. State in proper mathematics vocabulary the properties of multiplication.

3. Translate into math symbols:
    a) product of a and b
    b) sum of a and b
    c) difference of a and b
    d) quotient of a and b

4. Translate into symbols:
    a) the sum of x and 3
    b) the difference of 10 and m
    c) the product of 4 and y
    d) 8 subtracted from p
    e) the quotient of x and 2
    f) 10 divided by q
    g) the product of 2 and the sum of x and y
    h) the quotient of x and the difference of p and q

5. Use the distributive property to simplify each of the following:
    a) $3(a + 5)$

    b) $6(3x + 2)$

    c) $5(2x + 10)$

6. Find the perimeter. Write the formula, plug in the known values, and perform the computations to find the perimeter. Use the appropriate units with your answer.
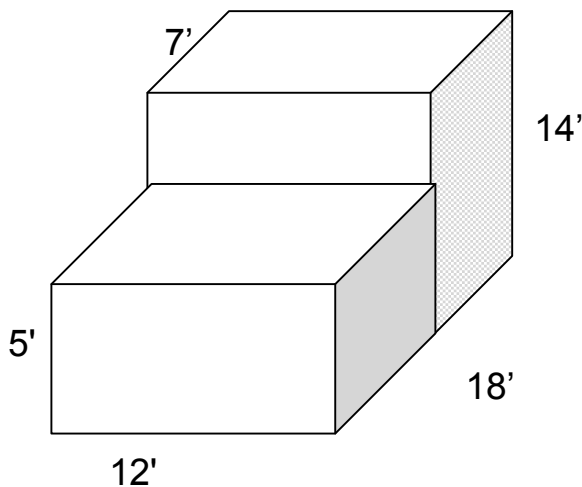
7. Find the area of the figure in problem #6. Write the formula, plug in the known values, and perform the computations to find the area. Use the appropriate units with your answer.

8. Find the volume. Write the formula, plug in the known values, and perform the computations to find the volume. Use the appropriate units with your answer.

6'

7'

5'

9. Find the volume. Write the formula, plug in the known values, and perform the computations to find the volume. Use the appropriate units with your answer.

7'

14'

5'

18'

12'

Name the addition or multiplication properties are used in each of the following.

10. $(5+6)+3 = 5+(6+3)$

11. $7 \cdot 1 = 7$

12. $9+0 = 9$

13. $5 \cdot 6 = 6 \cdot 5$

14. $(5 \cdot 8) \cdot 7 = 5 \cdot (7 \cdot 8)$

15. $3+(9+2) = (9+2)+3$

Find the following sums.

16. $135 + 741$

17. $378 + 794$

18. $5,401 + 329 + 10,653$

Find the following differences.

19. $937 - 413$

20. $853 - 276$

21. $7,052 - 3,967$

Find the following products.

22. $9(186)$

23. $62(359)$

Find the following quotients.

24. $28,782 \div 41$

25. $583 \overline{)12,243}$

Round the number 516,249 to the nearest

26. hundred

27. ten-thousand

Use the rule for the order of operations to simplify each expression as much as possible.

28. $6 + 2 \cdot 7^2$

29. $4(1 + 6 \cdot 5)$

30. $8(5)^2 - 7(3)^3$

31. $8 - 2(5 - 3)$

32. $8 \div 4 \cdot 2$

33. If a person has scores of 143, 187, 150, and 176 for four games of bowling, what is the average (mean) score for the four games?

34. Find the mode: 14, 18, 27, 73, 36, 18.

35. Find the median: 42, 48, 64, 73, 15, 62.

Write each of the following using mathematical symbols, then simplify.

36. Five more than the difference of 17 and 4.

37. Twice the sum of 11 and 7.

38. The quotient of 20 and 5 increased by 9.

For each of the following, use the correct operation(s) (multiplication, addition, subtraction or division) to find the answer.

39. A hardware store bought 35 cases of motor oil and each case contained 24 quarts or motor oil. How many quarts of motor oil did the hardware store purchase?

40. A person has a yearly income of $18,324. What is the person's monthly income?

41. Karen earns $7 an hour for the first 40 hours she works in a week and $10 and hour for every hour after that. Each week she has $85 deducted from her check for income taxes and retirement. If she works 47 hours in one week, how much is her take-home pay?

ANSWERS:

1. see text, pg. 18, 19
2. see text, pg. 53
3a. ab
3b. a +b
3c. a – b
3d. a ÷ b
4a. x + 3
4b. 10 – m
4c. 4y
4d. p – 8
4e. $x \div 2$ or $\dfrac{x}{2}$
4f. $10 \div q$ or $\dfrac{10}{q}$
4g. $2(x + y)$
4h. $x \div (p - q)$ or $\dfrac{x}{p - q}$
5a. 3a + 15
5b. 18x + 12
5c. 10x + 50
6. 58 ft.
7. 110 ft^2
8. 210 ft.^{3}
9. 1,836 ft.^{3}

10. associative property of addition
11. multiplication property of 1
12. addition property of zero
13. commutative property of multiplication
14. commutative and associative property of multiplication
15. commutative property of addition
16. 876
17. 1,172
18. 16,383
19. 524
20. 577

21. 3,085
22. 1,674
23. 22,258
24. 702
25. 21
26. 516,200
27. 520,000
28. 104
29. 124
30. 11
31. 4
32. 4
33. 164
34. 18
35. 55
36. (17 – 4) + 5 = 18
37. 2(11 + 7) = 36
38. $(20 \div 5) + 9 = 13$
39. 840 qts.
40. $1,527
41. $265