

1.1

Section 1.1 Practice

Solve the equation. Check your solution.

1. $-13 + x = -25$

2. $h + 4\pi = 30\pi$

3. $4.5 = m + 2.75$

4. $a - \frac{3}{4} = \frac{2}{3}$

5. $\frac{1}{6} = \frac{5}{12} + p$

6. $c - 2.3 = -5.1$

7. You shopped online and found your MP3 player for \$9.75 less than the store price p . The online price was \$64. Write and solve an equation to find the store price.

Solve the equation. Check your solution.

8. $-1.6x = 8$

9. $\frac{h}{2\pi} = 4.3$

10. $\frac{4}{3} = \frac{2}{15}j$

11. $-23.6 = 5.9t$

12. $6\pi = -2\pi q$

13. $\frac{3}{7}w = -4$

14. The area of a rectangle is 55.8 square inches. The width of the rectangle is 4.5 inches. Write and solve an equation to find the length of the rectangle.

Solve the equation. Check your solution.

15. $5.6 \div 0.4 - r = -8$

16. $n - 5 \bullet \frac{2}{3} = \frac{3}{4}$

17. Write an addition equation and a multiplication equation that each has a solution of -5 .
18. A fruit basket contains oranges and grapefruits. One-third of the oranges and one-fourth of the grapefruits were spoiled. You threw away 4 oranges and 7 grapefruits. How many pieces of fruit were in the basket?
19. You and two friends pay \$40 for tickets. The cost was divided three ways in the ratio 1 : 3 : 6. How much did each person pay?

1.2

Section 1.2 Practice

Solve the equation. Check your solution.

1. $4k - 1.5k = 50$

2. $\frac{5}{7}p - \frac{2}{7}p + 12 = 6$

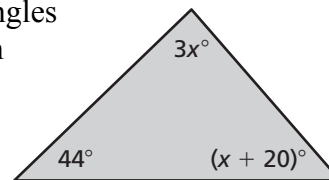
3. $\frac{2}{3}y + y - 4 = 31$

4. $2.1x + 1.3x - 4.6 = 2.2$

5. $3(5 - 2h) + 9 = -30$

6. $14(x - 3) - 22x = -18$

7. The sum of the measures of the interior angles of the triangle is 180° . Write and solve an equation to find the value of the variable.

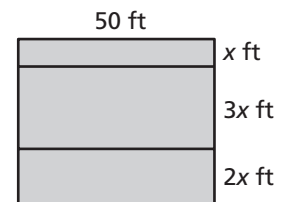


8. A rectangular field has an area of 2100 square feet. The length of the field is 50 feet.

a. How wide is the field?

b. The field is divided into 3 rectangles, as shown. Write and solve an equation to find x .

c. Determine the dimensions of each rectangle.



9. You are researching the price of MP3 players. You found an average price of \$58.80. One MP3 player cost \$56 and another cost \$62. Find the price of the third MP3 player.
10. The perimeter of a triangle is 42 inches. One side measures 18 inches. The shortest side measures x inches. The longest side measures 1 inch less than four times the length of the shortest side. Write and solve an equation to find the length of the longest side.
11. You order 4 fish sandwiches and a hamburger. The cost of the hamburger is \$2.50. Your total bill before tax is \$14.30. Write and solve an equation to find the cost of a fish sandwich.

The letters a , b , and c represent constants. Solve the equation for x .

12. $3bx + 2a = 4a$

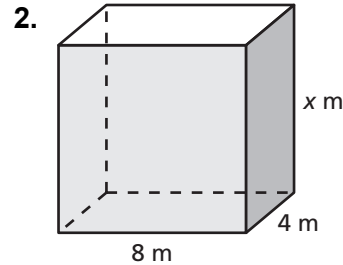
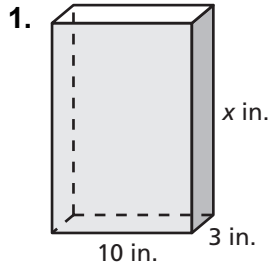
13. $5ax + c = 8.5$

14. $bx - c = a$

1.3

Section 1.3 Practice

The value of the figure's surface area is equal to the value of the figure's volume. Find the value of x .



Solve the equation. Check your solution.

3. $5y - 14 = 2y - 2$

4. $\frac{4}{7}m = \frac{2}{7}(2m + 1)$

5. $16(p - 2) = 7p + 4$

6. $4(2s - 3) = 3(s + 1)$

7. $0.3(t - 2) = -0.6 + 0.3t$

8. $\frac{2}{9}n + \frac{1}{2} = \frac{2}{3}(n + 3)$

9. Describe and correct the error in solving the equation.

✗	$0.4x = 0.2(x - 8)$ $0.4x = 0.2x - 8$ $0.2x = -8$ $x = -40$
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10. A parcel of land is in the shape of a rectangle with length ℓ (in feet). Sixty-five percent of the length is waterfront and 70 feet of the length is not waterfront. Write and solve an equation to find the length of the parcel of land.
11. The original price p for a necklace is the same at both jewelry stores. At Store A, the sale price is 60% of the original price. Last month, at Store B, the sale price was \$40 less than the original price. This month, Store B is selling the necklace for 80% of last month's reduced price. The current sale prices are the same for both stores. Write and solve an equation to find the original price of the necklace.

1.4

Section 1.4 Practice

Solve the equation for y .

1. $3x - \frac{1}{4}y = -2$

2. $5x + 8y = 6\pi$

3. $4y - 3.2x = 6$

4. $4.5x - 1.5y = 5.4$

5. The formula for the volume of a rectangular prism is $V = \ell wh$.a. Solve the formula for w .b. Use the new formula to find the value of w when $V = 210$ cubic feet, $\ell = 10$ feet, and $h = 3$ feet.

Solve the equation for the bold variable.

6. $T = hP + 2\mathbf{B}$

7. $C = 1000 + 80x$

8. $S = \pi r^2 + 2\pi r\mathbf{h}$

9. $A = \frac{1}{2}\mathbf{Pa}$

10. The formula $F = \frac{9}{5}C + 32$ converts temperatures from Celsius C to Fahrenheit F .a. Solve the formula for C .b. The boiling point of water is 212°F . What is the temperature in Celsius?c. If a house thermostat is set at 80°F , what is the setting in Celsius? Round your answer to the nearest tenth.11. The formula for the area of a sector of a circle is $A = \frac{m}{360}\pi r^2$, given the measure m of the angle and the radius r of the circle.a. Solve the formula for m .

b. Find the measure of the angle when the area of the sector is 5 square centimeters and the radius is 2 centimeters. Round your answer to the nearest tenth.

c. If the area of the sector in part (b) is greater than 5 square centimeters, is the measure of the angle *greater than* or *less than* the answer to part (b)? Explain.