

Solving & Writing Equations

Name: _____

Date: _____

1. What value of y makes the equation below true?

$$y + 2.9 = 11$$

- A.** 8.1 **B.** 8.9 **C.** 9.1 **D.** 13.9

2. What is the solution of the equation below?

$$x + 8.63 = 11.001$$

- A.** $x = 19.631$ **B.** $x = 10.138$ **C.** $x = 3.471$ **D.** $x = 2.371$

3. Solve the equation below.

$$0.3r = 2.1$$

- A.** $r = 0.7$ **B.** $r = 1.8$ **C.** $r = 7$ **D.** $r = 18$

4. What is the solution to the equation below?

$$4w = \frac{2}{3}$$

- A.** $w = \frac{2}{12}$ **B.** $w = \frac{2}{7}$ **C.** $w = \frac{8}{3}$ **D.** $w = 3\frac{1}{3}$

5. An equation is shown below.

$$12 - 9 + c = 12$$

What value of c makes the equation true?

- A.** 0 **B.** 3 **C.** 9 **D.** 12

6. Which equation has the solution $x = 2$?

- A.** $2x - 3 = 19$ **B.** $3x + 2 = 8$ **C.** $4x - 4 = -4$ **D.** $5x + 1 = 10$

7. Which equation is true when $n = 4$?

- A.** $2n = 6$ **B.** $n + 3 = 7$ **C.** $9 - n = 13$ **D.** $\frac{n}{12} = 3$

8. The set of numbers 1, 7, 11, and 36 contains values for m . What value of m makes the equation below true?

$$4m + 8 = 36$$

- A.** 1 **B.** 7 **C.** 11 **D.** 36

9. A rectangular exercise mat has a perimeter of 36 feet. The length of the mat is twice the width. Write and solve an equation to determine the length, in feet, of the mat. Then find the area, in square feet, of the mat.
10. It is recommended that one fire extinguisher be available for every 6,000 square feet in a building. Write and solve an equation to determine x , the number of fire extinguishers needed for a building that has 135,000 square feet.
11. A hotel has a number of meeting rooms, m , available for events. Each meeting room has 325 chairs. Write an equation to represent c , the total number of chairs, in all of the meeting rooms at the hotel.
- If $m = 7$, use your equation to find the total number of chairs in all of the meeting rooms at the hotel.
12. Jorge bought a crate of floor tiles for \$95.94. The crate had 6 boxes of floor tiles. Each box contained 20 floor tiles.

Write and solve an equation to determine the cost per box, b . Then write and solve a second equation to determine the cost per tile, t , to the nearest cent.

13. A sandwich shop sells sandwiches for \$5.95 each, including tax. The shop received a total of \$71.40 from the sales of sandwiches one afternoon. Which equation can be used to determine the number of sandwiches, x , sold by the sandwich shop that afternoon?
- A.** $5.95 + x = 71.40$ **B.** $5.95 \div 71.40 = x$ **C.** $5.95x = 71.40$ **D.** $5.95 \div x = 71.40$
14. Paul bought a package of 6 spiral notebooks for a total cost of \$13.50. Which equation represents p , the cost, in dollars, of each notebook?
- A.** $p = 13.50 - 6$ **B.** $p = 13.50 \times 6$ **C.** $p = 13.50 + 6$ **D.** $p = 13.50 \div 6$
15. Nadia bought 5 tickets to attend a spaghetti supper fundraiser at her school. The equation $5x = 32.50$ can be used to find x , the cost of each ticket in dollars. Which equation represents the cost of each ticket?
- A.** $x = \frac{32.50}{5}$ **B.** $x = 32.50(5)$ **C.** $x = 32.50 - 5$ **D.** $x = 32.50 + 5$
16. John's friend told him that he could earn \$49 for handing out flyers at a local concert. John wants to calculate the hourly rate. If he works a total of 3.5 hours, the equation $3.5x = 49$ can be used to determine his hourly rate. What would John's hourly rate be, in dollars?
- A.** \$1.40 **B.** \$14.00 **C.** \$45.50 **D.** \$171.50