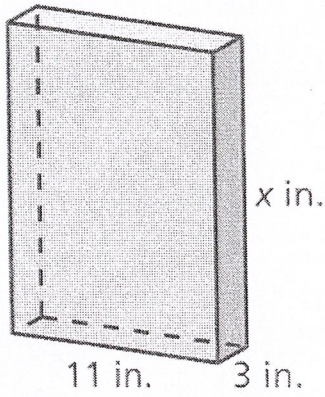


Homework 1-3

1. Is it possible to find a value of x so that the value of the surface area (in square inches) is equal to the value of the volume (in cubic inches)?



- yes
- no

If possible, what is the value of x ?

$x = \square$ _____

Write an equation to justify your answer.

An equation is \square .

2. Solve the equation.

$$m - 4 = 2m$$

$m = \square$

3. Solve the equation.

$$6x = 5x + 22$$

$x = \square$

-
4. Solve the equation.

$$12(2w - 3) = 6w$$

$$w = \square$$

5. Solve the equation.

$$2(4z - 1) = 3(z + 2)$$

$$z = \square$$

6. Solve the equation.

$$\frac{1}{6}d + \frac{2}{3} = \frac{1}{4}(d - 2)$$

$$d = \square$$

7. **YOU BE THE TEACHER** Your friend solves the equation shown. Is your friend correct?

$$\begin{aligned}3x - 4 &= 2x + 1 \\3x - 4 - 2x &= 2x + 1 - 2x \\x - 4 &= 1 \\x - 4 + 4 &= 1 - 4 \\x &= -3\end{aligned}$$

- yes
- no

Explain your reasoning.

8. **MODELING REAL LIFE** Write and solve an equation to find the number of miles you must drive to have the same cost for each of the car rentals. Let m represent the number of miles.



\$20 plus \$0.50 per mile



\$30 plus \$0.25 per mile

Equation:

$m =$

9. Solve the equation.

$$3x - 1 = 1 - 3x$$

Solution:

10. Solve the equation.

$$4x - 9 = 3.5x - 9$$

Solution:

11. Solve the equation.

$$5x - 7 = 4x - 1$$

Solution:

12. Solve the equation.

$$\frac{1}{2}x + \frac{1}{2}x = x + 1$$

Solution:

13. Solve the equation.

$$-3(2x - 3) = -6x + 9$$

Solution:

14. Solve the equation.

$$6(7x + 7) = 7(6x + 6)$$

Solution:

-
15. **YOU BE THE TEACHER** Your friend solves the equation shown. Is your friend correct?

$$\begin{aligned} -4(2n - 3) &= 12 - 8n \\ -8n + 12 &= 12 - 8n \\ -8n &= -8n \\ 0 &= 0 \\ \text{The solution is } n &= 0. \end{aligned}$$

yes

no

16. **NUMBER SENSE** The weight of an object is equal to $\frac{3}{4}$ of its own weight plus $\frac{3}{4}$ of a pound. How much does the object weigh?

The object weighs pounds.