

2.7 Multiplication Equations

Pg. 81 3-20-18

Mar 15-8:51 AM

Division is the inverse of multiplication. To solve an equation that contains multiplication, use division to "undo" the multiplication.

$$4m = 32$$
~~$$\frac{4m}{4} = \frac{32}{4}$$~~

$$m = 8$$

Caution!

4m means "4 × m."

$4 \cdot 8 \stackrel{?}{=} 32$
 $32 = 32 \checkmark$

Mar 15-8:53 AM

Solve the equation. Check your answer.

$5p = 75$ *p is multiplied by 5.*

~~$$\frac{5p}{5} = \frac{75}{5}$$~~

Divide both sides by 5 to undo the multiplication.

$p = 15$

Check $5p = 75$

$5(15) \stackrel{?}{=} 75$ *Substitute 15 for p in the equation.*

$75 \stackrel{?}{=} 75 \checkmark$ *15 is the solution.*

$$\begin{array}{r} 2 \\ 15 \\ 5 \\ \hline 75 \end{array}$$

Mar 15-8:54 AM

Solve the equation. Check your answer.

$16 = 8r$ *r is multiplied by 8.*

~~$$\frac{16}{8} = \frac{8r}{8}$$~~

$16 \stackrel{?}{=} 8(2)$
 $16 = 16 \checkmark$

$2 = r$

$r = 2$

$8r = 16$

Mar 15-8:54 AM

Solve the equation. Check your answer.

$5p = 75$ *p is multiplied by 5.*

~~$$\frac{5p}{5} = \frac{75}{5}$$~~

$p = 15$

$5(15) \stackrel{?}{=} 75$

$75 = 75 \checkmark$

Mar 15-8:55 AM

Solve the equation. Check your answer.

$8a = 72$ *a is multiplied by 8.*

~~$$\frac{8a}{8} = \frac{72}{8}$$~~

$a = 9$

$8 \cdot 9 \stackrel{?}{=} 72$

$72 = 72 \checkmark$

Mar 15-8:55 AM

Solve the equation. Check your answer.

$$\frac{18}{3} = \frac{3w}{3} \quad w \text{ is multiplied by 3.}$$

$$6 = w$$

$$w = 6$$

$$3w = 18$$

$$18 \stackrel{?}{=} 3(6)$$

$$18 = 18 \checkmark$$

Mar 15-8:55 AM

Solve each equation. Check your answers.

$$3x = 12$$

$$x = 4$$

$$3 \cdot 4 \stackrel{?}{=} 12$$

$$12 = 12 \checkmark$$

Mar 15-8:57 AM

B $8 = 4w$

$$2 = w$$

$$w = 2$$

$$8 \stackrel{?}{=} 4(2)$$

$$8 = 8 \checkmark$$

Mar 15-8:57 AM

PROBLEM SOLVING The area of a rectangle is 56 square inches. Its length is 8 inches. What is its width?

- The area of the rectangle is 56 square inches.
- The length of the rectangle is 8 inches.

Draw a diagram to represent this information.

56	w
8	

$$l \cdot w = A$$

$$\frac{8w}{8} = \frac{56}{8}$$

$$w = 7$$

Mar 15-8:55 AM

Lesson Quiz

- $10y = 300$
- $2y = 82$
- $63 = 9y$
- $78 = 13x$
- The area of a board game is 468 square inches. Its width is 18 inches. What is the length?

Mar 15-8:56 AM