

Solve Multiplication and Division Equations

Multiplication and division are inverse operations

Use division to solve a multiplication equation. Use multiplication to solve a division equation.

Both sides of an equation can be multiplied by the same number to make the coefficient of the variable 1

Solve $\frac{n}{3} = 7$

multiply both sides by 3. $3 \times n = 3 \times 7$
 $3n = 21$

Always check your solution.

$$\frac{n}{3} = 7$$

$$\frac{21}{7} = 7 \text{ Replace } n \text{ with } 21.$$

$$3 = 7 \text{ The solution checks.}$$

Both sides of an equation can be divided by the same number to make the coefficient of the variable 1

Solve $6y = 24$
 Divide both sides by 6.

$$\frac{6y}{6} = \frac{24}{6}$$

$$y = 4$$

Always check your solution. $6y = 24$

$$6y = 24$$

$$6 \times 4 = 24 \text{ Replace } y \text{ with } 4$$

$$24 = 24 \text{ P The solution checks.}$$

Examples:**A- Solve each equation. Then check.**

1) $6p = 24$

$$\underline{6/6p = 24/6}$$

$$\underline{p = 4}$$

$$\underline{6 \times 4 = 24}$$

$$\underline{24 = 24}$$

2) $12a = 36$

$$\underline{12/12a = 36/12}$$

$$\underline{a = 3}$$

$$\underline{12 \times 3 = 36}$$

$$\underline{36 = 36}$$

3) $t/5 = 7$

$$\underline{t \times 5/5 = 7 \times 5}$$

$$\underline{t = 35}$$

$$\underline{35/5 = 7}$$

$$\underline{7 = 7}$$