


MasterMath

Algebra

SOLVING EQUATIONS WITH
MULTIPLICATION AND DIVISION



Algebra

$6x = 18$

$y \div 2 = 4$

Solving Equations with Multiplic...

Inverse Operation

The opposite of multiply is divide

$6x = 12$ $6x \div 6 = 12 \div 6$ $x = 2$

The opposite of divide is multiply

$x \div 6 = 12$ $x \div 6 \times 6 = 12 \times 6$ $x = 72$

Solving Equations with Multiplic...

You try it!

$$4x = 8$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

$$4x = 8$$

$$\frac{\cancel{4}x}{\cancel{4}} = \frac{8}{4}$$

$$x = 2$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

Like Terms

$$3x + 5x + 4 + 2 = 8x + 6$$

$$3x + 2x^2 \neq 5x \neq 5x^2$$

$$3x + 4 + 5x + 2 = 8x + 6$$

← Commutative Property
of Addition

Solving Equations with Multiplication

Reciprocal

$$\frac{4}{5} \times \frac{5}{4} = \frac{20}{20} = 1$$

$$\begin{aligned} \frac{1}{2}x &= 4 \\ \frac{1}{2}x * \frac{2}{1} &= 4 * \frac{2}{1} \\ x &= 8 \end{aligned}$$

Solving Equations with Multiplication

You try it!

$$\frac{1}{3}z = 6$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

$$\frac{2}{3}z = 6$$

$$\begin{aligned} \frac{2}{3}z \cdot \frac{3}{2} &= 6 \cdot \frac{3}{2} \\ z &= \frac{18}{2} = 9 \end{aligned}$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

Translating from English to Algebra

The number of amusement parks in Michigan is 12. There are four times as many amusement parks in Florida. How many amusement parks are in Florida?

$$F = 4 \times 12$$

Solving Equations with Multiplication

You try it!

$$3x = 15$$



SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

$$3x = 15$$

$$\frac{3x}{3} = \frac{15}{3}$$
$$x = 5$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

$$4z + 2z = 24$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

$$4z + 2z = 24$$

$$6z = 24$$

$$z = 4$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

In their baseball league, Mary had twice as many hits as Roger. Mary had 68 hits. How many hits did Roger have?



SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

In their baseball league, Mary had twice as many hits as Roger (**R**). Mary had **68** hits. How many hits did Roger have?

$$R = 68 \div 2$$

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION

You try it!

Now, try it on your own. Go to www.MasterMath.info download *Solving Equations with Multiplication and Division* from the Worksheets Page, and test your skill.

SOLVING EQUATIONS WITH MULTIPLICATION AND DIVISION
