

**Solving Multiplication and Division Equations**

Use the following rules to solve algebraic equations.

	Rule or Property	Examples
<b>Division Property of Equality</b>	For any numbers $a$ , $b$ , and $c$ , with $c \neq 0$ , if $a = b$ , then $\frac{a}{c} = \frac{b}{c}$ .	$4x = -24$ $\frac{4x}{4} = \frac{-24}{4}$ $x = 6$
<b>Multiplication Property of Equality</b>	For any numbers $a$ , $b$ , and $c$ , if $a = b$ , then $ac = bc$ .	$\frac{1}{4}x = 12$ $4 \cdot \frac{1}{4}x = 4 \cdot 12$ $x = 48$

**Solve each equation.**

1.  $8y = 48$

2.  $-6x = 42$

3.  $3.6 = 12n$

4.  $1.5 = -3w$

5.  $0 = -0.6y$

6.  $18 = 0.5x$

7.  $-6 = -8y$

8.  $\frac{7}{4}n = 1$

9.  $\frac{1}{5}x = 10$

10.  $\frac{3}{4}y = 12$

11.  $-\frac{3}{5}y = -3$

12.  $4 = -\frac{1}{2}x$

13.  $8 = \frac{x}{-2}$

14.  $-\frac{4}{5}n = -\frac{1}{4}$

15.  $\frac{1}{2} = -\frac{5}{8}x$