

Solving Basic Equations with Multiplication or Division - Set 1

AB-SE2 1

Instructions: Use multiplication or division to solve each equation.

1 $\frac{4x}{4} = \frac{12}{4}$
 $x = 3$

2 $(5) \frac{x}{5} = 7(5)$
 $x = 35$

3 $(3) \frac{x}{3} = 9(3)$
 $x = 27$

4 $\frac{72}{9} = \frac{9x}{9}$
 $8 = x$
or $x = 8$

5 $\frac{12x}{12} = \frac{144}{12}$
 $x = 12$

6 $(4) 10 = \frac{x}{4}(4)$
 $40 = x$
or $x = 40$

7 $(x) \frac{24}{x} = 6(x)$
 $\frac{24}{6} = \frac{6x}{6}$
 $4 = x$ or $x = 4$

8 $\frac{5x}{5} = \frac{105}{5}$
 $x = 21$

9 $(12) \frac{x}{12} = 9(12)$
 $x = 108$

10 $(x) 15 = \frac{75}{x}(x)$
 $\frac{15x}{15} = \frac{75}{15}$
 $x = 5$

11 $(7) \frac{x}{7} = 22(7)$
 $x = 154$

12 $\frac{2x}{2} = \frac{142}{2}$
 $x = 71$

Solving Basic Equations with Multiplication or Division - Set 2

AB-SE2 2

Instructions: Use multiplication or division to solve each equation.

$$\begin{aligned} 1 \quad \frac{40}{8} &= \frac{8x}{8} \\ 5 &= x \\ \text{or } x &= 5 \end{aligned}$$

$$\begin{aligned} 2 \quad (\cancel{x}) 12 &= \frac{48}{\cancel{x}} (\cancel{x}) \\ \frac{12x}{12} &= \frac{48}{12} \\ x &= 4 \end{aligned}$$

$$\begin{aligned} 3 \quad (\cancel{8}) \frac{x}{8} &= 8 (\cancel{8}) \\ x &= 64 \end{aligned}$$

$$\begin{aligned} 4 \quad \frac{11x}{11} &= \frac{66}{11} \\ x &= 6 \end{aligned}$$

$$\begin{aligned} 5 \quad (\cancel{x}) \frac{32}{x} &= 4 (\cancel{x}) \\ \frac{32}{4} &= \frac{4x}{4} \\ 8 &= x \quad \text{or } x = 8 \end{aligned}$$

$$\begin{aligned} 6 \quad (\cancel{3}) \frac{x}{3} &= 24 (\cancel{3}) \\ x &= 72 \end{aligned}$$

$$\begin{aligned} 7 \quad \frac{6x}{6} &= \frac{78}{6} \\ x &= 13 \end{aligned}$$

$$\begin{aligned} 8 \quad (\cancel{4}) \frac{x}{4} &= 14 (\cancel{4}) \\ x &= 56 \end{aligned}$$

$$\begin{aligned} 9 \quad (\cancel{x}) 7 &= \frac{84}{\cancel{x}} (\cancel{x}) \\ \frac{7x}{7} &= \frac{84}{7} \\ x &= 12 \end{aligned}$$

$$\begin{aligned} 10 \quad \frac{65}{5} &= \frac{5x}{5} \\ 13 &= x \\ \text{or } x &= 13 \end{aligned}$$

$$\begin{aligned} 11 \quad \frac{3x}{3} &= \frac{135}{3} \\ x &= 45 \end{aligned}$$

$$\begin{aligned} 12 \quad (\cancel{20}) 3 &= \frac{x}{\cancel{20}} (\cancel{20}) \\ 60 &= x \\ \text{or } x &= 60 \end{aligned}$$

Solving Basic Equations (with decimals)

AB-SE2 3

Instructions: Use multiplication or division to solve each equation. You can use a calculator to do the decimal arithmetic if you'd like to.

$$\begin{aligned} 1 \quad \frac{5.0}{2.5} &= \frac{\cancel{2.5}x}{\cancel{2.5}} \\ 2 &= x \\ \text{or } x &= 2 \end{aligned}$$

$$\begin{aligned} 2 \quad (\cancel{2}) \frac{x}{\cancel{2}} &= 1.6 (2) \\ x &= 3.2 \end{aligned}$$

$$\begin{aligned} 3 \quad (\cancel{x}) 1.5 &= \frac{0.5}{\cancel{x}} (\cancel{x}) \\ \frac{\cancel{1.5}x}{\cancel{1.5}} &= \frac{0.5}{1.5} \\ x &= 0.\bar{3} \end{aligned}$$

$$\begin{aligned} 4 \quad \frac{\cancel{0.1}x}{\cancel{0.1}} &= \frac{2.4}{0.1} \\ x &= 24 \end{aligned}$$

$$\begin{aligned} 5 \quad (\cancel{2.1}) \frac{x}{\cancel{2.1}} &= 1.6 (2.1) \\ x &= 3.36 \end{aligned}$$

$$\begin{aligned} 6 \quad (\cancel{x}) \frac{3.5}{\cancel{x}} &= 2.5 (\cancel{x}) \\ \frac{3.5}{2.5} &= \frac{\cancel{2.5}x}{\cancel{2.5}} \\ 1.4 &= x \text{ or } x = 1.4 \end{aligned}$$

$$\begin{aligned} 7 \quad (\cancel{3}) \frac{x}{\cancel{3}} &= 6.4 (3) \\ x &= 19.2 \end{aligned}$$

$$\begin{aligned} 8 \quad \frac{\cancel{0.2}x}{\cancel{0.2}} &= \frac{0.7}{0.2} \\ x &= 3.5 \end{aligned}$$

$$\begin{aligned} 9 \quad (\cancel{x}) 8 &= \frac{8.4}{\cancel{x}} (\cancel{x}) \\ \frac{8x}{\cancel{8}} &= \frac{8.4}{\cancel{8}} \\ x &= 1.05 \end{aligned}$$

$$\begin{aligned} 10 \quad \frac{2.25}{0.75} &= \frac{\cancel{0.75}x}{\cancel{0.75}} \\ 3 &= x \\ \text{or } x &= 3 \end{aligned}$$

Solving Basic Equations (with negative numbers)

AB-SE2 4

Instructions: Use multiplication or division to solve each equation.

$$1 \quad \cancel{(5)} \frac{x}{5} = -6 \quad (5)$$

$$x = -30$$

$$2 \quad \frac{-3x}{-3} = \frac{-21}{-3}$$

$$x = 7$$

$$3 \quad \cancel{(x)} 3 = \frac{-12}{x} \quad (\times)$$

$$\frac{3x}{3} = \frac{-12}{3}$$

$$x = -4$$

$$4 \quad \cancel{(x)} \frac{-28}{x} = -4 \quad (x)$$

$$\frac{-28}{-4} = \frac{-4x}{-4}$$

$$7 = x \quad \text{or} \quad x = 7$$

$$5 \quad \cancel{(-7)} \frac{x}{-7} = 9 \quad (-7)$$

$$x = -63$$

$$6 \quad \frac{15x}{15} = \frac{-45}{15}$$

$$x = -3$$

$$7 \quad \cancel{(-8)} \frac{x}{-8} = -1 \quad (-8)$$

$$x = 8$$

$$8 \quad \frac{55}{-5} = \frac{-5x}{-5}$$

$$-11 = x$$

or $x = -11$

$$9 \quad \frac{-72}{-8} = \frac{-8x}{-8}$$

$$9 = x$$

or $x = 9$

$$10 \quad \cancel{(x)} 9 = \frac{-45}{x} \quad (\times)$$

$$\frac{9x}{9} = \frac{-45}{9}$$

$$x = -5$$