

Solving One-Step Equations Using Multiplication and Division

Step 1: Multiply or divide the number on the same side as the variable by both sides of the equation.

Step 2: Check your answer.

Directions: Solve each equation. Check your answer.

$$1. \frac{3x}{3} = \frac{-24}{3}$$

$$x = -8$$

Check

$$x = -8 \quad 3x = -24$$

$$3(-8) = -24$$

$$-24 = -24 \checkmark$$

$$2. \frac{-4y}{-4} = \frac{-32}{-4}$$

$$y = 8$$

$$y = 8 \quad -4y = -32$$

$$-4(8) = -32$$

$$-32 = -32 \checkmark$$

$$3. \frac{42}{-1.4} = \frac{-1.4b}{-1.4}$$

$$-30 = b \text{ OR } b = -30$$

$$b = -30 \quad 42 = -1.4b$$

$$42 = -1.4(-30)$$

$$42 = 42 \checkmark$$

$$4. -x = 75$$

$$\frac{-1x}{-1} = \frac{75}{-1}$$

$$x = -75$$

$$x = -75 \quad -x = 75$$

$$-(-75) = 75$$

$$75 = 75 \checkmark$$

$$5. \frac{-64m}{-64} = \frac{16}{-64}$$

$$m = -\frac{1}{4}$$

$$\frac{16 \div 16}{-64 \div 16} = \frac{1}{-4}$$

$$m = -\frac{1}{4} \quad -64m = 16$$

$$-64\left(-\frac{1}{4}\right) = 16$$

$$16 = 16 \checkmark$$

$$6. \frac{m}{-6} = 12 \cdot (-6)$$

$$m = -72$$

$$m = -72 \quad \frac{m}{-6} = 12$$

$$\frac{-72}{-6} = 12$$

$$7. \frac{x}{7} = -8 \cdot (-1)$$

$$\boxed{x = -56}$$

$$8. \frac{1}{3} = \frac{x}{15}$$

~~$$\frac{-1}{3} = \frac{x}{15}$$~~

$$\frac{1}{3}x = \frac{-15}{3}$$

$$\boxed{x = -5}$$

$$9. \frac{2x}{3} = -\frac{1}{4}$$

~~$$\frac{2x}{3} = -\frac{1}{4}$$~~

$$\frac{2}{8}x = \frac{-3}{8}$$

$$\boxed{x = -\frac{3}{2}}$$

$$12 = 12 \checkmark$$

$$x = -56 \quad \frac{x}{7} = -8$$

$$\frac{-56}{7} = -8$$

$$-8 = -8 \checkmark$$

$$x = -5 \quad -\frac{1}{3} = \frac{x}{15}$$

$$-\frac{1}{3} = \frac{-5}{15} = \frac{-5}{15}$$

$$-\frac{1}{3} = -\frac{1}{3} \checkmark$$

$$x = -\frac{3}{8} \quad \frac{2}{3}x = -\frac{1}{4}$$

$$\frac{2}{3} \cdot \left(-\frac{3}{8} \right) = -\frac{1}{4}$$

$$-\frac{1}{4} = -\frac{1}{4} \checkmark$$