

In mathematics there are operations that _____ each other. These are called _____ operations.

To undo adding we _____ so _____ and _____ are inverse operations.

To undo multiplying we Divide so Multiplication and division are inverse operations.

$$\frac{3x}{3} = \frac{12}{3} \quad \begin{array}{l} \text{given} \\ \text{divide by 3} \end{array}$$

$$x = 4 \quad \text{Substitution}$$

$$\frac{2x}{2} = \frac{-12}{2} \quad \begin{array}{l} \text{given} \\ \text{divide by 2} \end{array}$$

$$x = -6 \quad \text{Substitution}$$

$$\frac{-3m}{-3} = \frac{-27}{-3} \quad \begin{array}{l} \text{given} \\ \text{divided by -3} \end{array}$$

$$m = 9 \quad \text{Substitution}$$

$$\frac{2}{1} \cdot \frac{x}{2} = 3 \cdot 2 \quad \begin{array}{l} \text{given} \\ \text{multiply by 2} \end{array}$$

$$x = 6 \quad \text{Substitution}$$

$$3 \cdot \frac{x}{3} = 8 \cdot 3 \quad \begin{array}{l} \text{given} \\ x \text{ by 3} \end{array}$$

$$x = 24 \quad \text{Substitution}$$

$$\frac{8}{2} \cdot \frac{2}{8} x = 4 \cdot \frac{3}{2} \quad \begin{array}{l} \text{given} \\ \text{multiply by } \frac{3}{2} \end{array}$$

$$x = \frac{12}{2} \quad \text{Substitution}$$

$$x = 6 \quad \text{Substitution}$$

$$\frac{5}{3} \cdot \frac{3}{5} x = 6 \cdot \frac{5}{3} \quad \begin{array}{l} \text{given} \\ \text{multiply by } \frac{5}{3} \end{array}$$

$$x = 10 \quad \text{Substitution}$$

We can also use multiplication and division in our tables:

Equation $3x = 9$

Solution

1.

1.

2.

2.

3.

3.

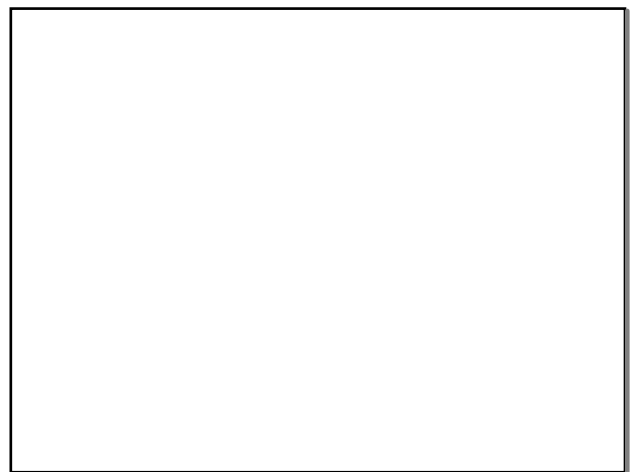
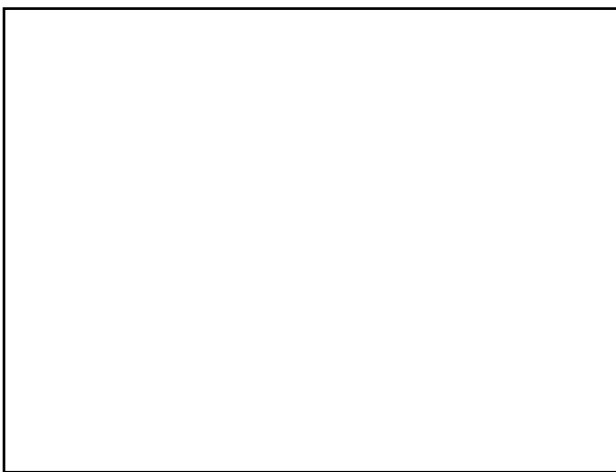
The solution is $x = \underline{\quad}$

Check:

Solving one-step equations requires us to undo the operation that has been done.

When we solve an equation we want to _____ the variable, or get it all by _____.

We do not need to write a table each time, although this can help, as long as we make sure that we always do the _____ thing to **each side**.



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

Check:

$$\frac{1}{5}x = 2$$

Check: