

Review

All Types of Equations

Ex: $x - 12 = 73$
 $+12 \quad +12$

$x = 85$

Ex: $y + 9 = 4$
 $-9 \quad -9$

$y = -5$

$$\text{Ex: } \begin{array}{r} 18 \\ -18 \\ \hline \end{array} + m = 46$$

$$m = 28$$

$$\text{Ex: } \begin{array}{r} -41 \\ +41 \\ \hline \end{array} + z = 17$$

$$z = 58$$

$$\text{Ex: } x - \frac{3}{5} = \frac{1}{12}$$
$$+ \frac{3}{9} \quad + \frac{3}{9}$$

$$x = \frac{41}{60}$$

$$\text{Ex: } \frac{-27}{-3} = \frac{-3n}{-3}$$

$$9 = n$$

$$\frac{3}{5} + \frac{1}{12}$$
$$\left. \begin{array}{l} \frac{36}{60} + \frac{5}{60} \end{array} \right) = \frac{41}{60}$$

Ex: ~~7~~ $\frac{x}{7} = 21 \cdot 7$

$$x = 147$$

Ex: ~~3~~ $\frac{x}{3} = \frac{5}{24} \cdot \frac{-3}{1}$

$$x = \frac{-15}{24}$$

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

Ex: ~~$\frac{4 \cdot 3}{3 \cdot 4} x = \frac{57}{1} \cdot \frac{4}{3}$~~

$$x = \frac{228}{3}$$

$$x = 76$$

Ex: ~~$\frac{16x}{16} = \frac{80}{16}$~~

$$x = 5$$

Ex: $3x + 1 = 154$

~~$3x + 1 = 154$~~
 $-1 \quad -1$

~~$3x = 153$~~
 ~~$\frac{3x}{3} = \frac{153}{3}$~~

$x = 51$

Ex: $7 - \frac{2}{3}x = -25$
 $-7 \quad -7$

~~$\frac{2}{3}x = -32$~~
 ~~$x = -32 \cdot \frac{3}{2}$~~
 $x = \frac{96}{2}$

$x = 48$

$$\text{Ex: } \cancel{5} \cdot \frac{12-x}{\cancel{5}} = 14 \cdot 5$$

$$\begin{array}{r} \cancel{12} - x = 70 \\ -\cancel{12} \quad -\cancel{12} \end{array}$$

$$-x = 58$$

$$x = -58$$

$$\text{Ex: } 4(y+1) = \frac{1}{5}(25y-80)$$

$$\begin{array}{r} 4y + 4 = 5y - \cancel{16} \\ +16 \end{array}$$

$$\begin{array}{r} 4y + 20 = 5y \\ -\cancel{4y} \quad -\cancel{4y} \\ \hline 20 = y \end{array}$$

$$\text{Ex: } \underline{5x} + 1 - \underline{8x} = -3\left(x - \frac{1}{3}\right)$$

$$-3x + 1 = -3x + 1$$

all real numbers

$$\text{Ex: } 2(2x + 3) = 4(x + 3)$$

$$\begin{array}{r} 4x + 6 = 4x + 12 \\ -4x \quad -4x \end{array}$$

$$6 = 12$$

no solution

$$\text{Ex: } 2y - 7 = -4y - 5$$

$+4y$ $+4y$

$$6y - 7 = -5$$

$+7$ $+7$

$$\frac{6y}{6} = \frac{2}{6}$$

$$y = \frac{1}{3}$$