

Ex.

$$5x - 8 = 12$$

$$\begin{array}{r|l} +8 & +8 \\ \hline 5x & = 20 \\ \hline \end{array}$$

$$\frac{5x}{5} = \frac{20}{5}$$

$$x = 4$$

Ex

$$\frac{x}{3} + 6 = -4$$

$$\begin{array}{r|l} -6 & -6 \\ \hline \end{array}$$

$x + 2x + 4 =$

check:

$$\frac{-30}{3} + 6 = -4$$

$$-10 + 6 = -4$$

$$-4 = -4$$

✓

$$3 \cdot \frac{x}{3} = -10 \cdot 3$$

$$x = -30$$

3 Step

$$\begin{array}{r}
 \text{S} \quad \text{G} \quad \quad \quad \text{G} \quad \text{S} \\
 2x - 18 = 10x - 6 \\
 -10x + 18 \quad \quad \quad -10x + 18 \\
 \hline
 \end{array}$$

check:

$$\begin{aligned}
 2\left(\frac{3}{2}\right) - 18 &= 10\left(\frac{3}{2}\right) - 6 \\
 -3 - 18 &= -15 - 6 \\
 -21 &= -21 \checkmark \\
 \text{☺}
 \end{aligned}$$

$$\begin{aligned}
 \frac{-8x}{-8} &= \frac{12}{-8} \\
 x &= -\frac{12}{8} = -\frac{3}{2}
 \end{aligned}$$

$$(10x) - 5(-7x) = -8(6 + 5x)$$

$$\begin{array}{r|l} \begin{array}{r} \text{S} \quad \text{G} \\ 3x - 5 \\ +40x + 5 \\ \hline \end{array} & \begin{array}{r} \text{S} \quad \text{G} \\ -48 - 40x \\ + 5 + 40x \\ \hline \end{array} \end{array}$$

check:

$$\begin{aligned} 10(-1) - 5 - 7(-1) &= -8(6 + 5(-1)) \\ -10 - 5 + 7 &= -8(6 - 5) \\ -15 + 7 &= -8(1) \\ -8 &= -8 \quad \checkmark \end{aligned}$$

$$\begin{array}{r} 43x = -43 \\ \hline 43 \\ \hline x = -1 \end{array}$$

$$\begin{array}{r} 10x = 0 \\ \hline 10 \quad 10 \\ \hline x = 0 \end{array}$$

9.

$$\begin{array}{r|l}
 \begin{array}{r}
 S \\
 -3x + 10 \\
 -x \quad -10
 \end{array} & = \\
 \hline
 \begin{array}{r}
 G \\
 -4x \\
 -4
 \end{array} & \\
 \end{array}
 \quad
 \begin{array}{r|l}
 \begin{array}{r}
 G \\
 x - 38 \\
 -x \quad -10
 \end{array} & = \\
 \hline
 \begin{array}{r}
 S \\
 -48 \\
 -4
 \end{array} & \\
 \end{array}$$

$$x = 12$$

15.

$$-5(-2x + 7) = 55$$

$$\begin{array}{r|l}
 \begin{array}{r}
 10x - 35 \\
 +35 \quad +35
 \end{array} & = \\
 \hline
 \begin{array}{r}
 10x \\
 10
 \end{array} & = \\
 \end{array}
 \quad
 \begin{array}{r|l}
 \begin{array}{r}
 55 \\
 +35
 \end{array} & = \\
 \hline
 \begin{array}{r}
 90 \\
 10
 \end{array} & \\
 \end{array}$$

$$x = 9$$

11.

$$\begin{array}{r|l}
 \begin{array}{r}
 S \\
 4x + 6 \\
 -6x \quad +6
 \end{array} & = \\
 \hline
 \begin{array}{r}
 G \\
 -2x \\
 -2
 \end{array} & \\
 \end{array}
 \quad
 \begin{array}{r|l}
 \begin{array}{r}
 S \\
 -16 + 6x \\
 -6 \quad -6x
 \end{array} & = \\
 \hline
 \begin{array}{r}
 G \\
 -22 \\
 -2
 \end{array} & \\
 \end{array}$$

$$x = 11$$