

Objective: TSWBAT

Solve two step equations using  
the distributive property and in-  
volving fractions

# Examples

①  $2(x-4) = 8$

$$\begin{array}{r} 2x - 8 = 8 \\ +8 \quad +8 \\ \hline 0 \end{array}$$

$$\frac{2x}{2} = \frac{16}{2} \quad x = 8$$

②  $-3(9+2b) = 33$

$$\begin{array}{r} -27 - 6b = 33 \\ +27 \quad +27 \\ \hline 0 \end{array}$$

$$\begin{array}{r} -6b = 60 \\ -6 \quad -6 \\ \hline b = -10 \end{array}$$

③  $-24 = 3(-2y-7)$

$$\begin{array}{r} -24 = -6y - 21 \\ +21 \quad +21 \\ \hline -3 = -6y \end{array}$$

$$\frac{-3}{-6} = \frac{-6y}{-6} \quad y = \frac{1}{2}$$

④  $8 - 3x + 5 + 5x = 7$

$$\begin{array}{r} 13 + 2x = 7 \\ -13 \quad -13 \\ \hline 0 \end{array}$$

$$\frac{2x}{2} = \frac{-6}{2} \quad x = -3$$

⑤  $4y + \frac{2}{3} = 1$

$$\begin{array}{r} 12y + 2 = 3 \\ -2 \quad -2 \\ \hline 12y = 1 \end{array}$$

$$\frac{12y}{12} = \frac{1}{12} \quad y = \frac{1}{12}$$

⑥  $\frac{3}{4}x + 1 = 10$

$$\begin{array}{r} 3x + 4 = 40 \\ -4 \quad -4 \\ \hline 3x = 36 \end{array}$$

$$\frac{3x}{3} = \frac{36}{3} \quad x = 12$$

⑦  $\frac{3}{8} - \frac{1}{4}x = \frac{1}{16}$

$$\begin{array}{r} 6 - 4x = 1 \\ -6 \quad -6 \\ \hline -4x = -5 \end{array}$$

$$\frac{-4x}{-4} = \frac{-5}{-4} \quad x = \frac{5}{4} \text{ or } 1\frac{1}{4} \text{ or } 1.25$$

$$\textcircled{8} \quad 9^{(2)} + 2^{(2)} = \frac{1}{2}^{(2)}$$

$$182 + 4 = 1$$

$$\frac{-4}{0} \quad \frac{-4}{-4}$$

$$\frac{182}{18} = \frac{-3}{18}$$

$$z = -\frac{1}{6}$$

$$\textcircled{9} \quad 4^{(20)} + \frac{1}{4}^{(20)} + 6x^{(20)} = -\frac{11}{20}^{(20)}$$

$$80 + 5 + 120x = -11$$

$$85 + 120x = -11$$

$$\frac{-85}{0} \quad \frac{-85}{120}$$

$$120x = -96$$

$$x = -\frac{4}{5}$$

$$\textcircled{10} \quad \frac{2}{3}^{(15)} + 2^{(15)} + \frac{3}{5}^{(15)} + x^{(15)} = \frac{4}{15}^{(15)}$$

$$10 + 30 + 9 + 15x = 4$$

$$49 + 15x = 4$$

$$\frac{-49}{0} \quad \frac{-49}{15}$$

$$\frac{1}{15}x = \frac{-45}{15}$$

$$x = -3$$