

# Assignment

## Introduction, Solving Equations ANSWER KEY

See below for the answers on PAGE 2.

1.  $\frac{x+5}{4} - 10 = 8$

2.  $8x + 10 = -32 + x$

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

4.  $\frac{5}{3}x + 8 = 12$

5.  $\frac{3(x+12)}{2} = 108$

6.  $7x - 20 = 3x - 32$

7.  $\frac{36}{x} + 12 = 8$

8.  $2x = 36 - x$

9.  $2(3x - 5) - 12 = 32$

10.  $\frac{-9}{2}x = -9 - 5x$

Answers:

1.  $X=67$

$$\begin{array}{r} x+5-10=8 \\ 4 \quad +10 \quad +10 \\ \hline 4 \cdot \frac{x+5}{4} = 18 \cdot 4 \end{array}$$

$$\begin{array}{r} x+5=72 \\ -5 \quad -5 \\ \hline x=67 \end{array}$$

2.  $X=-6$

$$\begin{array}{r} 8x+10=-32+x \\ -x \quad -x \\ \hline 7x+10=-32 \\ -10 \quad -10 \\ \hline 7x=-42 \\ \frac{7x}{7} = \frac{-42}{7} \end{array}$$

$$x=-6$$

3.  $X=18$

$$\begin{array}{r} -\frac{3x}{2} = (9-2x) \cdot 2 \\ -\frac{3x}{2} = 18-4x \\ +4x \quad +4x \\ \hline -\frac{3x}{2} + 4x = 18 \end{array}$$

$$x=18$$

4.  $X=12/5$

$$\begin{array}{r} \frac{5}{3}x+8=12 \\ -8 \quad -8 \\ \hline \frac{5}{3}x=4 \end{array}$$

$$x=4 \left( \frac{3}{5} \right)$$

$$x=\frac{12}{5}$$

5.  $X=60$

$$\begin{array}{r} 3(x+12)=108 \cdot 2 \\ \frac{3(x+12)}{3} = \frac{216}{3} \\ x+12=72 \\ -12 \quad -12 \\ \hline x=60 \end{array}$$

6.  $X=-3$

$$\begin{array}{r} 7x-20=3x-32 \\ -3x \quad -3x \\ \hline 4x-20=-32 \\ +20 \quad +20 \\ \hline 4x=-12 \\ \frac{4x}{4} = \frac{-12}{4} \end{array}$$

$$x=-3$$

7.  $X=-9$

$$\begin{array}{r} 36+12=8 \\ x \quad -12 \quad -12 \\ \hline x \cdot \frac{36}{x} = -4 \cdot x \end{array}$$

$$\frac{36}{-4} = \frac{-4x}{-4}$$

$$x=-9$$

8.  $X=12$

$$\begin{array}{r} 2x=36-x \\ +x \quad +x \\ \hline 3x=36 \\ \frac{3x}{3} = \frac{36}{3} \end{array}$$

$$x=12$$

9.  $X=9$

$$\begin{array}{r} 2(3x-5)-12=32 \\ 6x-10-12=32 \\ 6x-22=32 \\ +22 \quad +22 \\ \hline 6x=54 \\ \frac{6x}{6} = \frac{54}{6} \end{array}$$

$$x=9$$

10.  $x = -18$

$$\begin{array}{r} -\frac{9}{2}x = -9 - 5x \\ +5x \end{array}$$

$$\begin{array}{r} 2 \cdot \frac{1}{2}x = -9 \cdot 2 \\ \hline x = -18 \end{array}$$