

Name Key
Mrs. Roubos

Date _____
8R Period _____

Homework

Solve the equation for the given variable

#1: Solve + state the properties used
#2: Solve + check

1) $7x - 3 = 4x + 6$

$$\begin{array}{r} -4x \quad -4x \\ \hline 3x - 3 = 6 \end{array}$$

Subtraction Property of Equality

$$\begin{array}{r} +3 \quad +3 \\ \hline 3x = 9 \end{array}$$

Addition Property of Equality

$$\begin{array}{r} \frac{3x}{3} = \frac{9}{3} \end{array}$$

Division Property of Equality

$x = 3$

2) $2x - 12 = 8 - 3x$

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

$$\begin{array}{r} +12 \quad +12 \\ \hline 5x = 20 \end{array}$$

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

$x = 4$

check

$$2x - 12 = 8 - 3x$$

$$2(4) - 12 = 8 - 3(4)$$

$$8 - 12 = 8 - 12$$

$$-4 = -4$$

✓

3) $7 - 3x = 5x - 9$

$$\begin{array}{r} +3x \quad +3x \\ \hline 7 = 8x - 9 \end{array}$$

$$\begin{array}{r} +9 \quad +9 \\ \hline 16 = 8x \end{array}$$

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

$x = 2$

4) $5x - 4 = 2x - 13$

$$\begin{array}{r} -2x \quad -2x \\ \hline 3x - 4 = -13 \end{array}$$

$$\begin{array}{r} +4 \quad +4 \\ \hline 3x = -9 \end{array}$$

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

$x = -3$

5) $3x - 4 = 2x + 6$

$$\begin{array}{r} -2x \quad -2x \\ \hline 1x - 4 = 6 \end{array}$$

$$\begin{array}{r} +4 \quad +4 \\ \hline 1x = 10 \end{array}$$

$$\frac{1x}{1} = \frac{10}{1}$$

$x = 10$

6) $3x + 4 + 2x = 10x - 1$

$$\begin{array}{r} 5x + 4 = 10x - 1 \\ -5x \quad -5x \\ \hline 4 = 5x - 1 \end{array}$$

$$\begin{array}{r} +1 \quad +1 \\ \hline 5 = 5x \end{array}$$

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

$x = 1$