

Name _____

Notes

Date

8/28/2020Period 1st

• Solving equation with variables
on both sides and Literal equation.

1) $3 = b - 4b$

$$\begin{array}{r} 3 = \cancel{3b} \\ -3 \quad -3 \\ \hline -1 = b \end{array}$$

check

$3 = b - 4b$

$3 = -1 - 4(-1)$

$3 = -1 + 4$

$3 = 3 \checkmark$

2) $4 = x + 5 + 1$

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

check

$4 = x + 5 + 1$

$4 = -2 + 5 + 1$

$4 = -2 + 6$

$4 = 4 \checkmark$

$$3) \quad 6(2+7x) = -282$$

$$\begin{array}{r} 12 \\ -12 \\ \hline \end{array} + 42x = -282$$

$$\frac{42x}{42} = \frac{-294}{42} \quad \text{check}$$

$$x = -7$$

$$6(2+7x) = -282$$

$$6(2+7(-7)) = -282$$

$$6(2-49) = -282$$

$$6(-47) = -282$$

$$-282 = -282 \checkmark$$

$$4) \quad -1 - 6V + 6 = 9 - 5V$$

$$\begin{array}{r} -6V \\ +6V \\ \hline \end{array} + 5 = 9 - 5V$$

$$\begin{array}{r} 5 \\ -9 \\ \hline \end{array} = \begin{array}{r} 9 \\ -9 \\ \hline \end{array} + 1V$$

$$\boxed{-4 = 1V}$$

check

$$-1 - 6V + 6 = 9 - 5V$$

$$-1 - 6(-4) + 6 = 9 - 5(-4)$$

$$-1 + 24 + 6 = 9 + 20$$

$$23 + 6 = 29$$

$$29 = 29 \checkmark$$

$$8) \begin{array}{r} 5x = 5 + 6x \\ -6x \end{array}$$

$$\begin{array}{r} -1x = 5 \\ -1 \end{array}$$

$$x = -5$$

check

$$5x = 5 + 6x$$

$$5(-5) = 5 + 6(-5)$$

$$-25 = 5 - 30$$

$$-25 = -25 \checkmark$$

$$9) \begin{array}{r} -5(-x) = 1 - 2x \\ +x \end{array}$$

$$\begin{array}{r} -5 = 1 - x \\ -1 \end{array}$$

$$\begin{array}{r} -6 = -x \\ -1 \end{array}$$

$$6 = x$$

$$\begin{array}{r} -5 - x = 1 - 2x \\ +2x \end{array}$$

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

$$\rightarrow x = 6$$

$$\begin{array}{r} -5 - x = 1 - 2x \\ +5 \end{array}$$

$$\begin{array}{r} -x = 6 - 2x \\ +2x \end{array}$$

$$x = 6$$

$$\begin{array}{r} -5 - x = 1 - 2x \\ -1 \end{array}$$

$$\begin{array}{r} -6(-x) = -2x \\ +x \end{array}$$

$$\begin{array}{r} -6 = -1x \\ -1 \end{array}$$

$$6 = x$$

$$5) -5x - 6 - 6 = -2x - x$$

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

$$\frac{-12}{2} = \frac{2x}{2}$$

$$\begin{array}{l} -6 = x \\ x = -6 \end{array}$$

check

$$-5x - 6 - 6 = -2x - x$$

$$-5(-6) - 6 - 6 = -2(-6) - (-6)$$

$$30 - 12 = 12 + 6$$

$$18 = 18 \checkmark$$

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

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

$$\frac{-3}{-1} = \frac{-1x}{-1}$$

$$3 = x$$

check

$$4x - 1 - 2 = 3x$$

$$4(3) - 1 - 2 = 3(3)$$

$$12 - 3 = 9$$

$$9 = 9 \checkmark$$

$$7) 6k + k = 6 + 5k$$

$$\begin{array}{r} 7k = 6 + 5k \\ -5k \quad \quad -5k \\ \hline \end{array}$$

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

$$k = 3$$

check

$$6k + k = 6 + 5k$$

$$6(3) + 3 = 6 + 5(3)$$

$$18 + 3 = 6 + 15$$

$$21 = 21 \checkmark$$

$$14) u = \pi a + b \quad \text{for } a$$

$$\begin{array}{r} u = \pi a + b \\ -b \\ \hline u - b = \pi a \\ \hline \frac{u - b}{\pi} = \frac{\pi a}{\pi} \end{array}$$

$$\left(\frac{u - b}{\pi} = a \right) \quad a = (u - b) / \pi$$

$$15) x + c = d - r \quad \text{for } \underline{x}$$
$$\begin{array}{r} x + c = d - r \\ -c \\ \hline x = d - r - c \end{array}$$

$$\boxed{x = d - r - c}$$

$$16) a - k = v - w \quad \text{for } a$$
$$\begin{array}{r} a - k = v - w \\ + k \\ \hline a = v - w + k \end{array}$$

$$\boxed{a = v - w + k}$$