

Name: _____ Algebra 9 Unit 2 Lesson 1

Equations and Their Solutions plus One-Step Equations

DO NOW ~ Friday 10/11

Expand using the Distributive Property then simplify by combining like terms.

$$-4x + 2(3x - 5)$$

$$\boxed{-4x + 6x} - 10$$

$$2x - 10$$



Classwork

Notes		Which of the following is NOT an equation?	
Expression	Equation	A) $3 + 1 = 4 + 0$	B) $2(4x + 1)$
$2x - 10$	$3x + 5 = 2$	C) $x^2 - 2x = 8$	D) $1 + 5 = 6$
$\text{no} =$	$=$	Consider the equation $2x - 8 = 10 - x$ a) If $x = 5$, will the equation be true? How can you tell? $2(5) - 8 = 10 - (5)$ $2 \neq 5$ b) Show that $x = 6$ makes the equation true. $2(6) - 8 = 10 - (6)$ $4 \neq 4$ True	
		Determine if the following value given for x is a solution to the equation. Show the calculations. $x^2 - 1 = 2x + 2$ and $x = -1$ $(-1)^2 - 1 \neq 2(-1) + 2$ $0 \neq 0$ True	

Continue onto the next page.

Solve the following equations and do a quick check.

$$\begin{array}{r|l} x + 4 = 7 & \\ \hline -4 & -4 \\ \hline x & = 3 \end{array}$$

Check: ✓
 $3 + 4 = 7$

$$\begin{array}{r|l} y - 3 = -2 & \\ \hline +3 & +3 \\ \hline y & = 1 \end{array}$$

Check: ✓
 $1 - 3 = -2$

$$\begin{array}{r|l} -3c = -12 & \\ \hline +3 & +3 \\ \hline c & = 4 \end{array}$$

Check: ✓
 $-3(4) = -12$

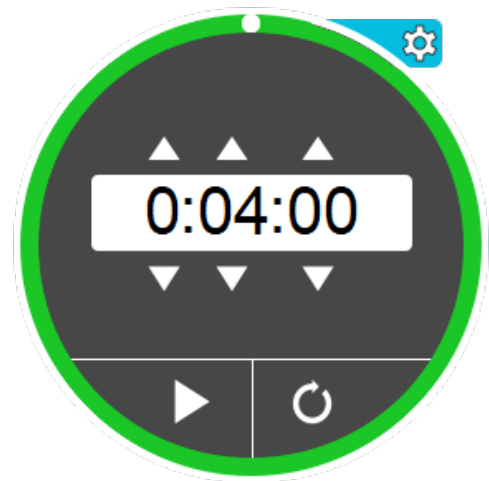
$$\begin{array}{r|l} -\frac{2}{1} \cdot \frac{c}{-2} = 7 \cdot -2 & \\ \hline c & = -14 \end{array}$$

Check: ✓
 $\frac{-14}{-2} = 7$

AAA

To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

- 1) Be in your seat
- 2) Take out your calculator
- 3) Have last night's homework out
- 4) Complete the do now



DO NOW ~ Tuesday 10/15

Determine whether the following value given for x is a solution to the equation. Show the calculations.

$$2x + 3 = 17 \text{ and } x = 7$$

$$2(7) + 3 \neq 17$$

$$17 \neq 17$$

True



Classwork

Solve the following equations and do a quick check.

$$5 + h = 9$$

$$\begin{array}{r} -5 \quad | \quad -5 \\ \hline h = 4 \end{array}$$

Check: $5 + 4 = 9$ ✓

$$g - 7 = -9$$

$$\begin{array}{r} +7 \quad | \quad +7 \\ \hline g = -2 \end{array}$$

Check: $-2 + 7 = -9$ ✓

$$-3x = 6$$

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

Check: $-3(-2) = 6$ ✓

$$\frac{b}{-4} = 2$$

$$\begin{array}{r} -4 \quad | \quad -8 \\ \hline b = -8 \end{array}$$

Check: $\frac{-8}{-4} = 2$ ✓

Mrs. Ferreri's Station ~ One-Step Equations*Solve. Show all your work.*

1) $7 = v - 9$

2) $13p = -39$

3) $21 = x + 17$

4) $-2x = -34$

5) $20 = n + 1$

6) $150 = -10b$

7) $272 = 16v$

8) $-6 = \frac{k}{6}$

9) $80 = -5n$

10) $15 = n - 5$

Continue to the next page.

$$a + 3 = 14$$

$$r + 5 = 9$$

$$x + 7 = -10$$

$$z + 3 = -8$$

$$4 + k = 6$$

$$5 + m = 9$$

$$w + 9 = -11$$

$$g + 1 = -9$$

$$a - 7 = 3$$

$$p - 2 = 4$$

$$y - 6 = -5$$

$$f - 10 = -2$$

Continue to the next page.

$$w - 4 = -8$$

$$u - 6 = -5$$

$$b + 4 = 9$$

$$v - 7 = -11$$

$$d + 3 = -2$$

$$s + 9 = 4$$

$$2 + x = -5$$

$$l + k = 7$$

$$-4 + c = 4$$

$$-3 + s = 9$$

$$-1 + j = -3$$

$$-2 + n = -7$$

$$h - 4 = -8$$

$$3 + d = 7$$

Computer Station ~ No Computer today...One-Step Equations

Solve the following equations and check.

$$-4a = 12$$

$$\frac{z}{-3} = 8$$

$$-6c = -60$$

$$-4x = -16$$

$$\frac{z}{-3} = 10$$

$$-5m = -10$$

$$\frac{y}{-1} = -5$$

$$-2g = -6$$

$$-3a = -21$$

$$-8v = -48$$

$$3y = -18$$

$$\frac{m}{-7} = 7$$

$$-4w = -4$$

$$-7w = -42$$

Continue to the next page.

$$3b = 9$$

$$\frac{n}{-6} = -2$$

$$\frac{k}{-3} = 11$$

$$-6g = 18$$

$$-8h = -48$$

$$\frac{j}{6} = -7$$

$$-4c = 8$$

$$-3s = 9$$

$$\frac{b}{-6} = -8$$

$$\frac{s}{8} = -9$$

$$h - 4 = -8$$

$$3 + d = 7$$

Mrs. Kennedy's Station ~ Equations and Their Solutions

Determine whether each of the following values for the given variable is a solution to the given equation. Show the calculations.

$$-8 + 6a + 2a = 4a + 5a \quad \text{and } a = -8$$

$$m - 2 = 4 - 7m + 6 - 12 \quad \text{and } m = 0$$

$$6m - 5 = 2m + 5m - 13 \quad \text{and } m = 10$$

$$6m - 3 = 7 + 8m \quad \text{and } m = -2$$

$$-8 + 5x = 2 + 7x \quad \text{and } x = -5$$

$$1 + 6x - 6 = 3x - 14 \quad \text{and } x = -3$$

$$4k + 26 = -7(k + 6) - 6k \quad \text{and } k = -4$$

$$-27 - 5m = -7 + 7(m - 8) \quad \text{and } m = 3$$

$$3(n - 8) = -19 - 2n \quad \text{and } n = 0$$

$$-2 + 4(8x - 7) = -2 + 4x \quad \text{and } x = 6$$

$$35 + 6r = -7(1 - 6r) + 6 \quad \text{and } r = 1$$

$$3(b - 4) = b - 26 \quad \text{and } b = -7$$

Independent Station ~ I have, who has...?

You must read the directions below about how to play this game. Go ONE step at a time.

- 1) Deal out the cards to make sure each player has the same amount of cards. Spread them out face up on your desk in front of you.***
- 2) Choose a player to start by choosing one of his or her cards and reading it. Simplify the "who has" part on a whiteboard.***
- 3) Find this "answer" under the "I have" section of one of the OTHER cards.***
- 4) Continue until all of the cards have been used.***

Homework ~ Tuesday 10/15

Determine whether each of the following values for the given variable is a solution to the given equation. Show the calculations.

$$2x + 3 = 13 \text{ and } x = 5$$

$$3x + 8 - x = 20 \text{ and } x = 14$$

$$3(x - 5) = 2(x - 8) \text{ and } x = 1$$

$$4(x - 2) + 6 = 5 \text{ and } x = -2$$