1-1 Solving Equations

Objectives:

-I can use inverse operations to solve two-step equations

-I can solve equations with multiple variables

-I can verify the solution to an equation

Vocabulary:

Isolate: Get the Variable alone

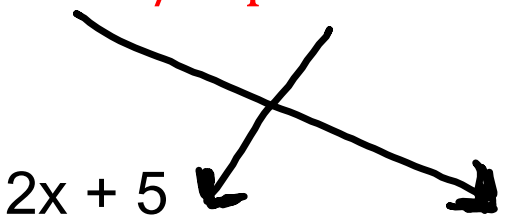
Inverse operation: operation that undoes another operation

Variable: Letters

Like terms: $3x + 6 - 2x - 1$

Coefficient: The # in front of the Variable.

Equations/Expressions:



Group the expressions and equations together

-4y

2-3=-1

12-y=4

7x=2

k-7

-6+8

-m

5+k=4

Describing an expression

Write an expression for the following statements

x more than 7 $7+x$

one third of a number $\frac{1}{3}a$

18 decreased by 3 times d $18-3d$

10 less a number n $n-10$

Directions to Harts	Get Back to AFHS
1. Turn left onto 600 N	1. Turn Right out of Hart
2. Turn right onto Main street	2.
3. Turn left onto 500 E	3. Turn Right @ State st.
4. Turn left at State St.	4.
5. Turn left into Harts	5. Turn Right on 500 E
	4. Turn Left on Main
	5. Right on 600 N

Inverse Operations:

×	÷
+	−
÷	×
−	+

Equation $x + 7 = 3$

$-7 \quad -7$

$x \quad -4$

$x = \underline{-4}$ Verify:

$-4 + 7 = 3$

$3 = 3$ ✓

Equation $3k = 9$

$\frac{1}{3} \quad \frac{1}{3}$

$k \quad 3$

$k = \underline{3}$ Verify:

Equation $\frac{1}{4}x = 16$

$4 \cdot \frac{1x}{4} = 16 \cdot 4$

$x = 64$

$\frac{1 \cdot 64}{4} = 16$ ✓

$x = _____$ Verify:

Equation $-2x + 5 = 11$

$-5 \quad -5$

$-2x = 6$

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

$x = -3$

Verify: $-2(-3) + 5 = 11$

$6 + 5 = 11$

x = _____

Equation $-c - 2 = 13$

$+2 \quad +2$

$-c = 15$

$c = -15$

Verify:

c = _____

Equation $\frac{b}{6} + 7 = 10$

$-7 \quad -7$

$\frac{b}{6} = 3$

$6 \cdot \frac{b}{6} = 3 \cdot 6$

$b = 18$

Verify:

b = _____

Solve $d = rt$ for r

$\frac{d}{t} = \frac{rt}{t}$

$\frac{d}{t} = r$

$r = \frac{d}{t}$

Solve $2x + 3y = 6$ for y

$-2x \quad -2x$

$3y = 6 - 2x$

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

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

Solve the following equations:

a. $2x + 4 = 10$

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