

**Semester 2**

**Math 9**

***Review of  
Equations from  
Grade 8***

# How to wrap a present...



BEOMAS  
SAMDEB  
 $2 + 4 \times 3 - 6$

# Warm-Up

February 3, 2016

What do you remember from GRADE 8???

1. Solve for the unknown

A.  $3z = 18$   
~~3~~  $\frac{z}{3} = \frac{18}{3}$   
 $z = 6$

*isolate*

B.  $8d - 2 = 6$   
 $8d - 2 + 2 = 6 + 2$   
 $\frac{8d}{8} = \frac{8}{8}$   
 $d = 1$

Rewrite so the variable is on the left side

$-10 = 3 - 4x$

$3 - 4x = -10$   
 $\boxed{3-3} - 4x = -10 - 3$   
 $\frac{-4x}{-4} = \frac{-13}{-4}$   
 $x = \frac{-13}{-4}$  or  $\frac{13}{4}$

$-4x + 3 = -10$   
 $-4x \boxed{+3-3} = -10 - 3$   
 $\frac{-4x}{-4} = \frac{-13}{-4}$   
 $x = \frac{-13}{-4}$

What is the difference between an expression and an equation???

***Expression***-- A mathematical statement made up of numbers and/or variables connected by operations

$$2a+3$$

***Equation***---A mathematical statement in which two expressions are equal.

$$2a+3=6$$

- To solve equations we need to undo operations.

← opposite

- Inverse operations reverse each other's results.



- Addition and subtraction are inverse operations



- Multiplication and division are also inverse operations

**\*\*\*Perform the inverse operations in the reverse order\*\*\***

Let's Look at a Basic Equation to remind you how this works...

Undo the operation

a)  $3x = 27$   
 $\frac{3x}{3} = \frac{27}{3}$   
 $x = 9$

b)  $x - 4 = 10$   
 $x \boxed{-4+4} = 10+4$   
 $x = 14$



A.  $-27.25 = c + 2.25$

$c + 2.25 = -27.25$

$c \boxed{+ 2.25 - 2.25} = -27.25 - 2.25$

$c = -29.5$

C.  $-76.05 = -9b$

$\frac{-9b}{-9} = \frac{-76.05}{-9}$

$b = 8.45$

B.  $\frac{\cancel{3}x}{\cancel{3}} = \frac{15.6}{\cancel{3}}$

$x = 5.2$

D.  $\frac{\cancel{(4.5)}w}{\cancel{4.5}} = -3.5 \quad (4.5)$

$w = -15.75$



$$\frac{d}{7} - 3 = 11$$

$$\frac{d}{7} \boxed{-3+3} = 11+3$$


$$\cancel{\frac{d}{7}} = 14$$

$$d = 98$$

$$-16 = \frac{p}{6} + 2$$

$$\frac{p}{6} + 2 = -16$$

$$\frac{p}{6} + 2 - 2 = -16 - 2$$
$$\cancel{\frac{p}{6}} = -18 \quad (6)$$
$$p = -108$$

Page 272  write them  
solve  
#8, #9, #10

SHOW ALL STEPS!

Practice The Steps!