

Semester 2



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

How to wrap a present...



Warm-Up

BEDMAS

January 29, 2020

What do you remember from GRADE 8???

1. Solve for the unknown

A. $\frac{3x}{3} = \frac{18}{3}$
 $x = 6$

B. $8d - 2 = 6$

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

Rewrite so the variable is on the left side

-10 = 3 - 4x

↓ solve

① $3 - 4x = -10$

② $-4x + 3 = -10$

$-4x + 3 - 3 = -10 - 3$

$\frac{-4x}{-4} = \frac{-13}{-4}$

$x = \frac{13}{4}$

$x = 3.25$

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

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

$$5n + 4$$

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

$$5n + 4 = 2$$
$$5n + 4 - 4 = 2 - 4$$

$$\frac{5n}{5} = \frac{-2}{5}$$

$$n = \frac{-2}{5}$$

$$n = -0.4$$

Chapter 6

Linear Equations and Inequalities

- To solve equations we need to undo operations.
- 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

Focus on
showing
steps!

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

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

C. $-27.25 = c + 2.25$

$$c + 2.25 = -27.25$$

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

$$c = -29.5$$

D. $\frac{3x}{3} = \frac{15.6}{3}$

$$x = 5.2$$

E. $-76.05 = -9b$

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

$$b = 8.45$$

F. $\frac{w}{4.5} = -3.5$