Warm Up September 11, 2018

1.) State the integer that best describes the situations below:

A. 5 yard gain. +5

B. a withdrawl of $40 −40

C. 9° below zero −9

D. 125 ft. below sea level −125

2.) Evaluate:

18 - 75

$18 + (-75) = -57$

$4 + (-11) = -7$

$(-8)(-3) = 24$

$-90 \div 5 = -18$

Order of Operations RECAP

PEMDAS

In the problem below, George made a mistake. Rewrite the steps of the problem correctly and describe George's error.

George's work

$8 \div 2^3 - 16 \div 2$
$4^3 - 16 \div 2$
$64 - 16 \div 2$
$64 - 8$
56

Your work

$8 \div 2^3 - 16 \div 2$
$8 \div 8 - 16 \div 2$
$1 - 16 \div 2$
$1 - 8$
-7

$$23 - [(5-3)^2 + 8 \div 4]$$

$$23 - [(2)^2 + 8 \div 4]$$

$$23 - [4 + 8 \div 4]$$

$$23 - [4 + 2]$$

$$23 - 6$$

$$17$$

EVALUATING EXPRESSIONS using Substitution

Main Ideas/Questions	Notes/Examples
ALGEBRAIC EXPRESSION	a mathematical phrase that consists of numbers and variables.
SUBSTITUTION *Property*	If a = b, then substitute a for b in expressions.
EVALUATING *Expressions*	**To evaluate an expression variable replacements:** • Substitute the variables with their given values. • Each time you substitute a variable with a number, put Parentheses around the number! • Follow the order of operations to evaluate!

EXAMPLES	**Directions:** Evaluate each expression using the variable replacements.	
	1. $ab^2 + c$ if $a = 2, b = 4, c = 7$	**2.** $3x^2 - 4x$ if $x = -2$

$(2)(4)^2+7$

$2(16)+7$

$32+7$

39

$3(-2)^2 - 4(-2)$

$3(4)-4(-2)$

$12+8$

20

YOU TRY!

Directions: Evaluate each expression using the variable replacements.

3. $a^2b - b^2$ if $a = 3$ and $b = -4$

4. $a^2b - b^2$ if $a = 4$ and $b = -7$

5. $-y^2 - 3xy$ if $x = -4$ and $y = 2$

6. $-y^2 - 3xy$ if $x = -\frac{5}{6}$ and $y = -12$

Homework:
Evaluating Expressions
Worksheet
(1-12)