Math 7 Get Ready for Ch.3 Test Name_____Block____

Operations with Integers

Be sure you know your rules for adding, subtracting, multiplying, and dividing integers.

Addition

Like(Same) OR Unlike(Different) Signs ?

ADD absolute values
Sign of Answer?
Attach Like Sign

SUBTRACT absolute values
Sign of Answer? Use sign of # with greatest absolute value

Subtraction

Rewrite subtraction with its related addition problem

- *Keep the leader the same
- *Change subtraction sign to addition
- *Write the opposite of the 2nd #

Use **ADDITION** rules

Multiplication and Division

LIKE (same) signs → Answer POSITIVE
UNLIKE (different)signs → Answer NEGATIVE

-9 - 3 -9(3) 9 + (-3) -9 - (-3) (-9)(-3) $\frac{-9}{3}$

Be sure you can use the order of operations correctly.

-8(9 + -2) $2(-3)^2$ (-6 - 2)(4 + -9)

Be sure you can find change in temperatures. Subtract the lowest one from the highest one.

Example:

Find the change between $-17^{\circ}C$ and $30^{\circ}C$

Highest one - Lowest one

30 - (-17)

30 + 17

47°

Find the change between $98^{\circ}F$ and $-12^{\circ}F$

Be sure you can find the absolute value of a number.

$|-3|$ $|-7|+|9|$ $|3|-|-4|$ $|9-12|$

Be sure you can write an expression for a situation, show work to evaluate the expression and then explain its meaning.

Tina burns 400 calories for each mile she runs. If she runs 5 miles, how many calories has she burned?

Sara deposits $500 in her banking account. Then she withdraws $80, deposits $100 and withdraws $50.

Be sure you can evaluate algebraic expressions for a given value by showing the substitution step and then following the order of operations agreement step by step.

Example: Evaluate if a = 7, b = -5 and c = 3

$b - ac^2$

$-5 - (7)(3)^2$

$-5 - 7(9)$

$-5 - 63$

$-5 + -63$

-68

Evaluate if x = -2, y = 10, and z = -4

$xyz + z^2$

Evaluate if x = -3, y = 2, and z = -5

$x - z + y$

Evaluate if a = -2, b = 6, and c = -4

$bc \div a$

Be sure you can tell when order is important and when it is not.

Example: Find each of the following and tell if order is important.

-9 + 2 and 2 + -9
-7 -7

Order is NOT important for addition.
The commutative property says you can change the order of addends and still get the same answer.

Is order important in subtraction? Explain.

-10 - 6 and 6 - (-10)

Is order important in multiplication? Explain.

(-3)(-6) and (-6)(-3)

Is order important in division? Explain.

$2 \div (-8)$ and $(-8) \div 2$

Be sure you know the vocabulary from the list on the study guide.

1) Find the additive inverse of -9 _____

2) Find the absolute value of 7 _____

3) Find the opposite of -12 _____

4) Give two integers that have an absolute value of 10 _____

5) Find the median of -1 9 -6 0 -2 _____

6) Write the related addition problem for -7 - 3 _____

7) Find the mean of this set of data 9 -1 -5 5 _____

8) Multiple Choice Question
Find the value of -x if x = -2

A) 2 B) -2 C) 4 D) 0