

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



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°C and 30°C

Find the change between 98°F and -12°F

Highest one - Lowest one
$$30 - (-17)$$

$$30 + 17$$

$$47^{\circ}$$

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

$$\begin{bmatrix} -3 \\ 3 \end{bmatrix}$$

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

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

burned?
$$(400)(5) = 2000$$

She now has

In 5 hours she burns

1470 in her account

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

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

$$(-2)(10)(-4) + (-4)^{2}$$

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

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

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

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 multiplication? Explain.

No

Is order important in subtraction? Explain.

-10-6 and 6-(-10)
-10+-6 6+10

$$\cdot$$
 -16 \neq 16
order is important

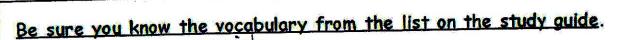
Is order important in division? Explain.

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

$$-\frac{2}{8}$$

$$-\frac{1}{4}$$

$$+ -4$$
Yes order is important



- 1) Find the additive inverse of -9
- 2) Find the absolute value of 7
- 3) Find the opposite of -12 \[\frac{7}{2}
- 4) Give two integers that have an absolute value of 10 $\left(\frac{-10 \text{ and } 10}{10}\right) \left|\frac{-10}{-10}\right| = 10$
- 5) Find the median of -1 9 -6 0 -2 (-1) -6 -2 (-1) 0 9
- 7) Find the mean of this set of data 9 1 5 = 5 9 + -1 + -8 + 5 8 = 2
- 8) Multiple Choice Question

 Find the value of -x if x = -2 -(-2)
- A) 2

10

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