

9-5-19

Aim: SWBAT compare integers and find the absolute value of a number.

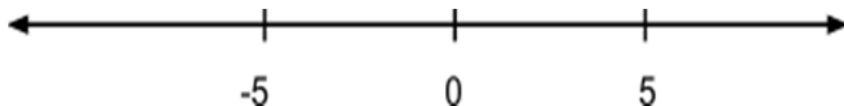
HW: Packet Page 4

Do Now: Complete the following.

- Write your full name on the cover of the math packet.
- Show me your course information sheet signature.
- Hand me your "Who Am I" activity sheet.

Aim: SWBAT compare integers and find their absolute values and opposites.

Opposite numbers are the same distance from zero on a number line, but in opposite directions. For example, 5 and -5 are opposites. They are both 5 units away from zero.



The only integer that is neither positive nor negative is 0.

Why is zero an integer? because it's a whole number

*****A negative sign does not automatically make a number an integer.*****

Examples of Integers	Examples of non-Integers
-5 7 -3	$-6\frac{1}{2}$ $3\frac{1}{4}$ $-\frac{1}{2}$
1 -15 563	9.75 -8.5
0	

whole amts.

partial amts

Translate each symbol.

>	<
is greater than	is less than

lefty makes less than

Compare using < or >. Then, translate the statement into words.

	A	B	C
1	15 < 25 "15 is less than 25"	92 > 63 "92 is greater than 63"	0 < 12 "0 is less than 12"
2	-5 < 0 "-5 is less than 0"	-5 > -18 "-5 is greater than -18"	-12 < 12 "-12 is less than 12"

Order the integers from least to greatest.

	A	B
3	-5, -9, 0, -3 -9, -5, -3, 0	-2, 7, -5, -1 -5, -2, -1, 7

Complete.

	A	B	C
4	Write a number that is not an integer? $6\frac{1}{2}$	Name the largest negative integer. -1	Name the smallest positive integer. 1

Absolute Value measures the distance a number is from zero on the number line. **Distance is always POSITIVE.** Therefore, a number's absolute value is ALWAYS positive.

The symbol for absolute value is "| |."

|4| says, "What is the absolute value of 4?"
How far is 4 from 0? |4| = 4

|-4| says, "What is the absolute value of -4?" | -4| = 4

True or False $-4 = 4$ False $|-4| = |4|$ True
 $4 = 4$

- {
 A subtraction sign
 A negative sign
 An opposite sign

- When it's a subtraction sign, it separates.

$10 - 2$ $14 - 6$ $30 - 15$
 "10 minus 2" "14 minus 6" "30 minus 15"

- When it's a negative sign, it comes with the number.

$10 - (-2)$ $-14 - 6$ $-30 - (-15)$
 "10 minus -2" "-14 minus 6" "-14 minus -15"

- When it's an opposite sign, it usually comes in a series or before a group.

$-(-3)$ $-(-(-3))$ $-|-3|$
 "the opp. of -3" "the opp. of the opp. of -3" "the opp. of the abs. value of -3"

Simplify the expression. (Start from the inside and work out)

	A	B	C
5	$-(-4)$	$-(-(-4))$	$-[-(-(-4))]$
6	$-(-(-(-4)))$	$-(- -4)$	$--- -4 $

HOMEWORK

Write the **OPPOSITE** and the **ABSOLUTE VALUE** of each integer:

1) 7 _____

3) -25 _____

2) 106 _____

4) 0 _____

Complete the statement with **<** or **>**.

5) -6 _____ 4

6) -2 _____ -4

7) 0 _____ 8

Match the integer expression with the verbal expression:

_____ 8) $-|12|$

A. the opposite of negative twelve

_____ 9) $|12|$

B. the absolute value of twelve

_____ 10) $-|-12|$

C. the opposite of the absolute value of negative twelve

_____ 11) $-(-12)$

D. the absolute value of negative twelve

_____ 12) $|12|$

E. the opposite of the absolute value of twelve

Simplify the expression.

13) $-(-9)$

14) $|-16|$

15) $-|-16|$

The table below shows the distances of the runners from the finish line when the winner won the race. Use the table to answer Questions 16 - 18.

Runner	Distance (ft.)
Sarah	-16
Beth	-2
Juanita	0
Tamika	-9
Ingrid	-36

16) Who won the race? _____

17) Who finished further back, Sarah or Tamika? _____

18) Arrange the girls' names in order from first-place to last-place finish.

_____ 1st Place _____ 2nd Place _____ 3rd Place _____ 4th Place _____ 5th Place