

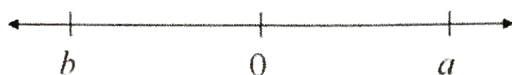
Name: _____

Date: _____

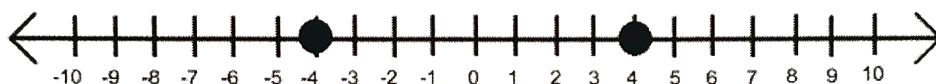
Aim: What do we know about integers?

DO NOW:

Assuming that a and b are the same distance from zero, what assumptions can you make about a and b ? List as many as you can.



Which of these numbers is closer to zero?



Absolute Value: _____

Evaluate each expression.

1.) $ -3 $	2.) $ 8.2 $	3.) $ \frac{1}{2} $	4.) $- 10 $	5.) $- -12 $

Addition

SAME SIGNS SUM (& keep sign)

DIFFERENT SIGNS DIFFERENCE (& keep sign of integer with larger absolute value)

Find the sum

1) $3 + 2$	2) $-4 + 5$	3) $-6 + 2$	4) $-8 + (-6)$
5) $-1 + (-3)$	6) $-12 + 7$	7) $5 + (-6)$	8) $13 + (-12)$

State whether the following is **ALWAYS**, **SOMETIMES**, or **NEVER** true.

- 9) When adding two integers with the same sign, the sum will be positive.
- 10) The sum of two integers with different signs is negative.
- 11) The sum of two opposites is zero.
- 12) The sum of two negative integers is positive.
- 13) The sum of a positive and a negative integer is greater than the positive integer.

Subtraction is the same as _____.

Subtraction: _____ (& follow rules for addition)

Find the difference

14) $-6 - 7$	15) $7 - 15$	16) $-8 - (-3)$
17) $10 - (-18)$	18) $51 - 82$	19) $-24 - (-11) - 30$

20) The variables a and b are integers. Tell whether the value of the expression $b - a$ is positive, negative or could be either if $b < a$.

Discussion Questions

- 1) If a is a real number, then $-a$ is always a negative number.
- 2) If a is a negative number, then $-a$ is always a positive number.
- 3) The opposite of a number is always a different number.
- 4) If x is a positive number, then x is greater than its opposite.
- 5) The opposite of the opposite of a number is that number itself.



The two ways to remember the addition of integers are:

- _____
- _____

When subtracting integers we must:

- _____