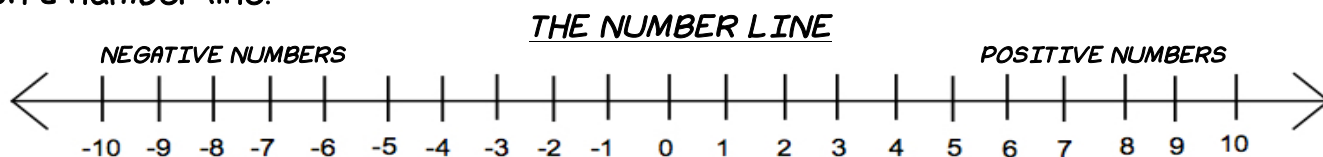


INTEGER CHEAT SHEET

Integers- A set of positive and negative whole numbers. They can be represented on a number line.



Absolute Value- The distance a number is from zero on the number line. An absolute value is never negative. Examples: $|-5| = 5$ and $|5| = 5$

ADDING INTEGERS

SAME SIGN- Add and Keep the Sign!

Add the absolute value of the numbers and keep the same sign.

$$(\text{positive}) + (\text{positive}) = \text{Positive}$$

$$(+4) + (+5) = +9$$

$$(\text{negative}) + (\text{negative}) = \text{Negative}$$

$$(-4) + (-5) = -9$$

DIFFERENT SIGNS- Subtract and Keep the Sign of the Bigger Number!

Subtract the absolute value of the numbers and keep the sign of the bigger number.

$$(-4) + (+5) = +1$$

$$(+4) + (-5) = -1$$

SUBTRACTING INTEGERS

Do not subtract integers. You must change the signs:

"Add the Opposite"

KEEP- Keep the sign of the first number

CHANGE- Change the subtraction sign to addition

CHANGE- Change the sign of the second number to the opposite sign. If it is positive- change to negative. If it is negative- change to positive.

$$(+4) - (-4)$$

$$\begin{array}{ccc} \text{Keep} & \text{change} & \text{change} \\ (+4) & + & (+4) \end{array}$$

NOW USE THE RULES FOR ADDING:

SAME SIGN- Add absolute values and keep sign:

$$(+4) + (+4) = 8$$

MULTPLYING INTEGERS

SAME SIGNS- POSITIVE

Multiply the numbers. Answer will be positive.

$$(-5) \times (-5) = +25$$

DIFFERENT SIGNS- NEGATIVE

Multiply the numbers. Answer will be negative

$$(+5) \times (-5) = -25$$

DIVIDING INTEGERS

SAME SIGNS- POSITIVE

Divide the numbers. Answer will be positive.

$$(-5) \div (-5) = +1$$

DIFFERENT SIGNS- NEGATIVE

Divide the numbers. Answer will be negative

$$(+5) \div (-5) = -1$$