

Absolute Value:

$$|x|$$

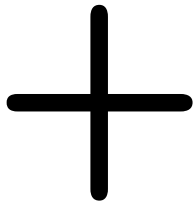
The distance a number is from zero.

It is always positive!

Can be used as grouping symbols.

Examples: $|3| = 3$

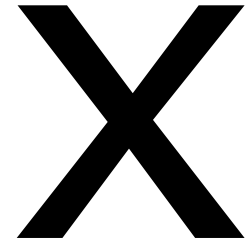
$$|-2| = 2$$



Addend + Addend = Sum



Minuend - Subtrahend = Difference



Factor • Factor = Product



Dividend ÷ Divisor = Quotient

1. Same Sign Rule:

Mathematical: When adding two integers that are the same sign, the sum is the sign of the addends and you **add** the absolute values of the addends.

Think: *“How many in all?”*

Example:

2. Opposite Rule:

Mathematical: When adding two integers that are opposites, their sum is always zero.

Think: *“Opposites create zero pairs!”*

Example:

3. Different Sign Rule:

Mathematical: When adding two integers that are different signs (one positive and one negative), the sum is the sign of the addend with the larger absolute value and you **subtract** the absolute values of the addends.

Think: *“What are there more of?
How many more?”*

Example:

Subtraction is the same as Adding the Opposite

Subtracting a Negative
is the same as
Adding a Positive

Example:

Subtracting a Positive
is the same as
Adding a Negative

Example:

$$(+) \cdot (+) = (+)$$

A positive times a positive equals a positive.

$$(-) \cdot (-) = (+)$$

A negative times a negative equals a positive.

$$(+) \cdot (-) = (-)$$

A positive times a negative equals a negative.

$$(-) \cdot (+) = (-)$$

A negative times a positive equals a negative.

OR

Even Rule: If there is an even number of negative factors, the product will be **POSITIVE**

Odd Rule: If there is an odd number of negative factors, the product will be **NEGATIVE**

$$(+) \div (+) = (+)$$

A positive divided by a positive equals a positive.

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

A negative divided by a negative equals a positive.

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

A positive divided by a negative equals a negative.

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

A negative divided by a positive equals a negative.

Examples: