The Philomath Club

Integers

Reviewing what integers are

What is an Integer

Integers: It is a positive or a negative whole number. Like ... . ., -3, -2, -1, 0, 1, 2, 3, 4,...

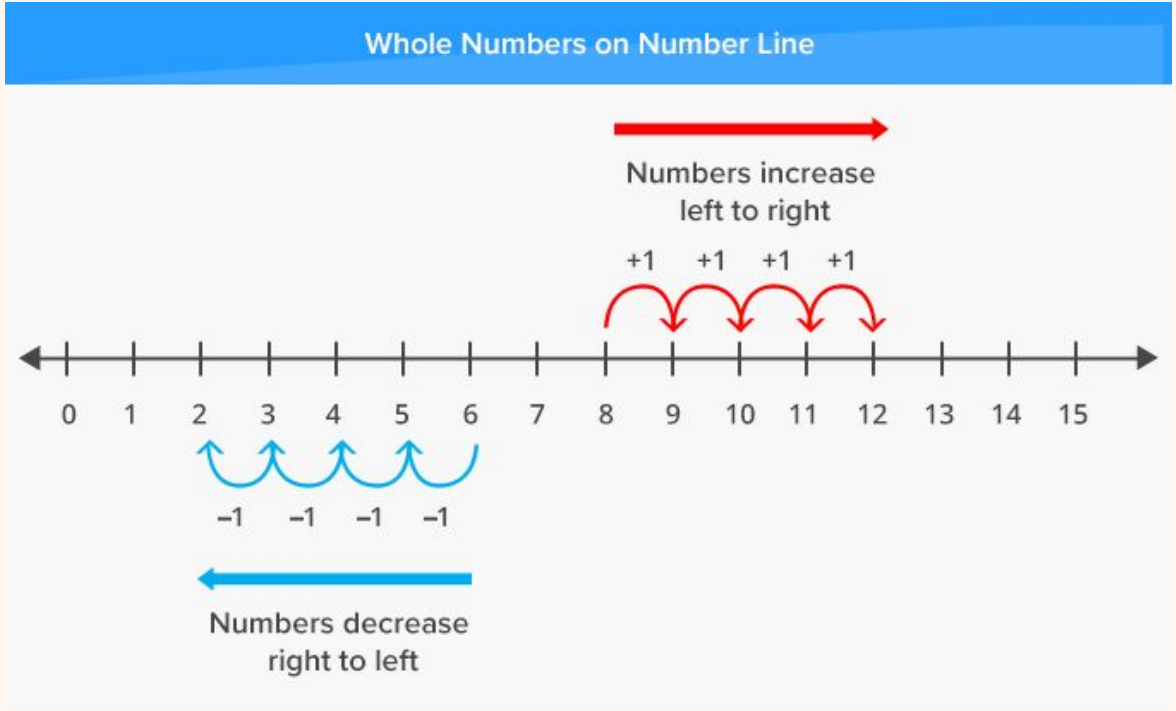
01.

Number line

Let’s learn some properties of Number line

What is a number line

A number line is the visual representation of the numbers!



Numbers in a number line

Numbers on the left side is smaller than the number in the right side.

Example:

8 is greater than 5

8 is smaller than 11

-5 is greater than -7

-5 is smaller than -1

-4 is smaller than 1

0 is greater than -10

More in number line

I am currently at -3. Now add 1 step. Where am I ?

I am currently at 0. Now add -1 step. Where am I?

I am currently at -5. Now subtract 1 step. Where am I?

Competition Time!

Integer Operations

There are 4 integer operations!

Addition +

Subtraction -

Multiplication x

Division ÷

Rules with bracket

We use brackets to not get confused.

For example: +(5)=5

-(6)=-6

(-10)=-10

There are some rules with brackets:

- \- is +
- \+ is -
- \+ \+ is +
- \+ \- is -

Examples

+ (- 1) = -1

- (- 100) = 100

- (20)= - 20

- (200)=200

+ (0)=0

- (0)=0

+ (+ 29)=29

When there is no sign then it's +

Example:

+ (20) = 20

(100) = 100

10 = + 10

Competition time

Same signs —> add

What is 5 + 1 ?

5 + 1 = 6

What is -5 -1 ?

Let’s go to the number line!

What is -6 + 2?

Let’s go to the number line!

What is -6 +(-1)?

Let’s go to the number line!

Some quick solves

-1 + (-1) =

-2 + 2=

4 - 4 =

-8 -8 =

10 + 10 =

18 -11-8 =

14 + (14) =

100 -(- 10)=

Competition Time

Multiplication and Division in integers

We use the same rules

$+ \times + = +$

$+ \times - = -$

$- \times + = -$

$- \times - = +$

$+ \div + = +$

$+ \div - = -$

$- \div + = -$

$- \div - = +$

Examples

5 x (- 5) = -25

-6 x (- 6) = 36

10 x 10 = 100

-2 x 0 = 0

10 x -1 = -10

Competition Time

BODMAS

When all the operations are together, we actually value some operations more than other

Try out this:

1 x (5 + 5) / 25 - 10

That’s why we need BODMAS!

Example

$1+ 2(-3+ 2)/-1 =$

$2x(-2)- 0+1 =$

$3x (-3+3) + 10=$

Competition Time