

dec 1, 2020

Unit 1 : Visualization Operations

Comparing Integers

Definitions :

The Natural Number :  $\mathbb{N}$

→ the set of positive whole numbers.

$$\mathbb{N} = \{ 1, 2, 3, 4, \dots \}$$

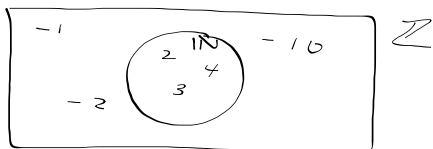
The Integers :  $\mathbb{Z}$

→ the set of positive negative whole numbers

$$\mathbb{Z} = \{ \dots, -2, -1, 0, 1, 2, \dots \}$$

$$10 \in \mathbb{Z}$$

$$-2.5 \notin \mathbb{Z}$$

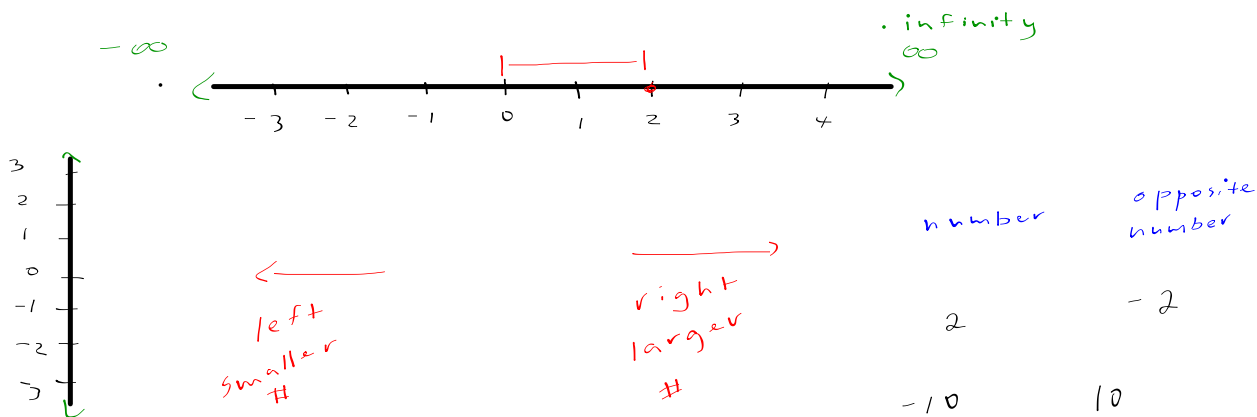


"doesn't belong to"

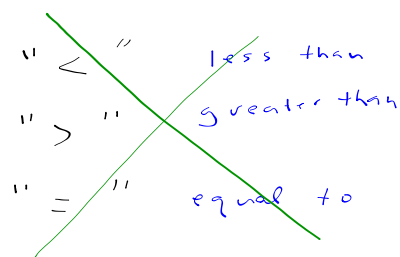
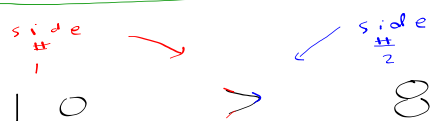
$$\mathbb{N} \subseteq \mathbb{Z}$$

is a subset of

Understanding the Visualization Tool: The Number Line



Reading Comparing Symbols



10 is greater than 8

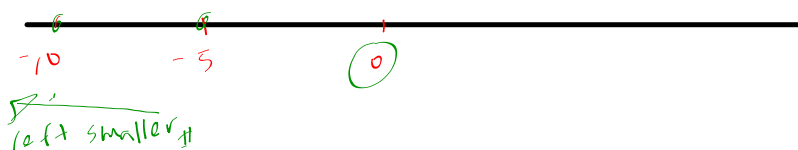
8 is less than 10

e.x.

$$f(x) = x^2 \rightarrow -2 < x < 4$$

$$-5 > -10$$

-5 is greater than -10



Word Question Example:  
you deposited \$150 into bank.

opposite value: - \$150

owe → negative

penalty → negative

Start 1<sup>st</sup> handout ☺

Block B

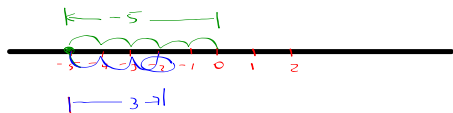
10:45 - 11:45

11:45 - 12:35 - lunch!

12:35 - 1:35

Illustrating the Addition of 2 Integers

ex.  $-5 + 3 = ?$



$-5 + 3 = -2$

$-50 + 30 = -20$

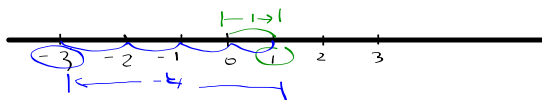
$? = -2$

step i. locate the 1st number on # line. (relative to 0)

step ii. from 1st #, add 2nd #. (relative to 1st #)

step iii. circle final answer → where you land (relative to 0)

ex.  $1 + (-4) = -3$



$|1| = 1$   
"the absolute of 1"

1's length

$|-4| = 4$   
the absolute value of -4 is 4

since  $4 > 1$   
Final answer is negative  
nota bene:  $-4 < 1$

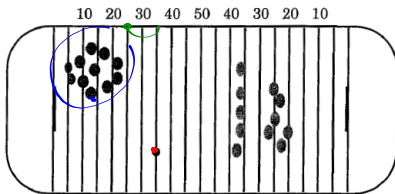
Translating Words into Positive or Negative Signs

e.x. practise

- e) During a football game, the football is on the **35** yard line; the team on the left in possession of the ball receives a **10** yard penalty. Where will the ball be placed?

$$35 + (-10) = 25$$

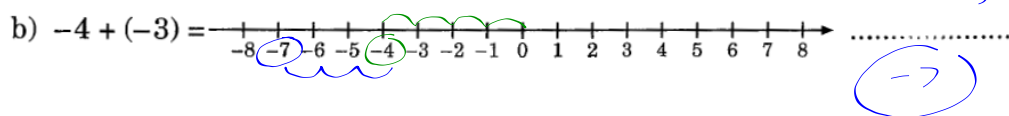
.....  
 Answer: .....



positive/upward → +  
 negative/downward → -  
 "connotation"

-4 (negative)      ← -      → +  
                             left+      right+

-3 (negative)      ← -      → +  
                             left+      right+





Book Room Hours:

(This week)

- 8:30 am - 9 am

- 12 - 1 pm