FLORENCE INTERNATIONAL SCHOOL
CLASS- VIII
WORKSHEET NO: 18
MATHS

NAME: **DATE: 22/04/2020**

TOPIC: RATIONAL NUMBERS

Please follow the link:
https://www.youtube.com/watch?v=NF3E8Cd28M0

https://www.youtube.com/watch?v=LWiP-tamH6k&t=19s

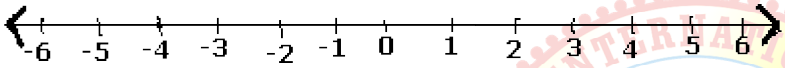
CONCEPT: Representation of rational number on number line:

Basic rules of representing rational no. on number line

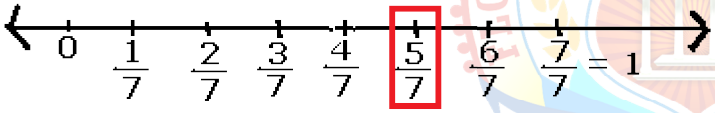
- If the rational no.fraction is proper then, it lies between 0 and 1.
- If the rational no fraction is improper then, we first convert it to mixed fraction and then the given rational no. lies between the whole number and next whole number.

We use following steps to represent a rational number or fraction for example, 5/7 on the number line.

Step 1 − We draw a number line.

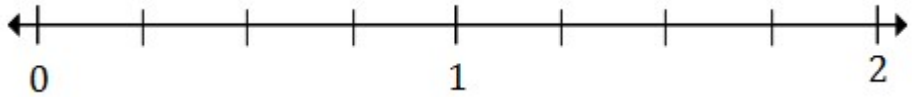


Step 2 − As the number 5/7 is a positive number, it lies on the right side of zero.
Step 3 − So, after zero mark, we have 1/7,2/7,3/7,4/7,5/7,6/7,1/7,2/7,3/7,4/7,5/7,6/7, and (7/7 = 1).
Step 4 − The rational number 5/7 on the number line is shown as follows.



Example 1:

Plot $\frac{1}{4}$ and $1\frac{2}{4}$ on the number line below



Solution

Step 1:

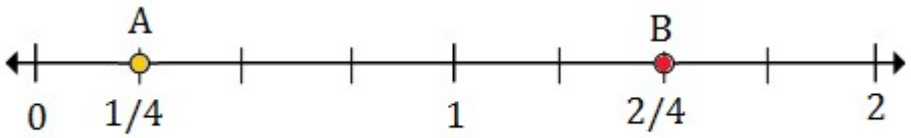
$\frac{1}{4}$ A lies between 0 and 1; $1\frac{2}{4}$ B lies between 1 and 2

Step 2:

Each division is divided into four parts as the bottom of the fractions is 4.

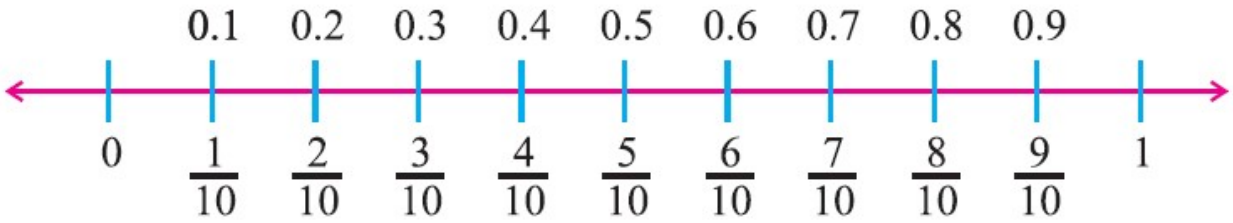
$\frac{1}{4}$ is the first mark after 0, therefore point A represents $\frac{1}{4}$

$1\frac{2}{4}$ is the second mark after 1, so point B represents $1\frac{2}{4}$



On a number line, can you find any integer between 1 and 2 ?
No.
But, between any two integers, we can represent rational numbers.

For example, between 0 and 1, we can represent rational numbers 1/10, 2/10, 3/10, ...which can be written as 0.1, 0.2, 0.3,.....



EXERCISE: Do the given question in your notebook.

Q1. Represent these number on the number line.

(i) $\frac{7}{4}$ (ii) $\frac{-5}{6}$ (iii) $\frac{-2}{11}$ (iv) $\frac{-9}{11}$

Q2. Write 5 rational number which are smaller than 2.

Q3. Find ten rational number between $\frac{-2}{5}$ and $\frac{1}{2}$.

Q4. Find ten rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$.

Q5. Fill in the blanks:

(i) Zero has _____ reciprocal.

(ii) The numbers _____ and _____ are their own reciprocals.

(iii) The reciprocal of -5 is _____.

(iv) Reciprocal of $\frac{1}{x}$, where $x \neq 0$ is _____.

(v) The product of two rational number is always a _____.

(vi) The reciprocal of a positive rational number is _____.

Q6. Verify that –(-x) =x for

(i) $x = \frac{11}{5}$ (ii) $x = \frac{13}{17}$.