Marking Fraction Lengths on the Number

Number Line

A number line is a straight line where numbers are placed at equal distances.

It starts from 0 and goes on (1, 2, 3, ...), and we can also mark fractions between whole numbers.

How to Mark Fractions on the Number Line:

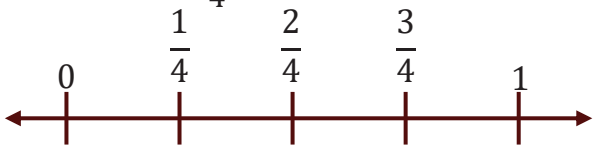
i. Divide the space between two whole numbers into equal parts

ii. The number of parts = denominator of the fraction

iii. Count and mark the point at the numerator

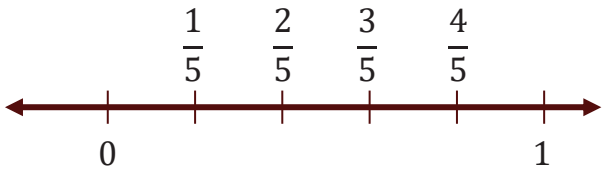
Example: Mark $\frac{1}{4}$ on the number line

- Look between 0 and 1
- Divide into 4 equal parts
- The first part is $\frac{1}{4}$



Example: Mark $\frac{3}{5}$ on the number line

- Divide between 0 and 1 into 5 parts
- Count 3 parts from 0
- $\frac{3}{5}$ comes after $\frac{2}{5}$ and before $\frac{4}{5}$



Example: Mark $\frac{7}{4}$ on the number line

- $\frac{7}{4} = 1\frac{3}{4}$ (Mixed fraction)
- Go past 1 to $1\frac{3}{4}$

↳ $\frac{7}{4}$ is 3 parts after 1

Properties of Fractions on the Number Line

i. Fractions are placed between whole numbers

   $\frac{1}{2}$ lies between 0 and 1

ii. Equal division between numbers depends on the denominator

   $\frac{1}{3}, \frac{2}{3}, \frac{3}{3}$

iii. Mixed fractions go beyond 1

   $\frac{5}{4} = 1\frac{1}{4}$

iv. All fractions can be represented on the number line, even improper ones

v. It helps in comparing fractions visually

   $\frac{2}{5} < \frac{3}{5} < \frac{4}{5}$

Summary

- Divide the number line into equal parts
- Use denominator for number of parts
- Use numerator to count the position
- Useful for comparing and understanding size of fractions