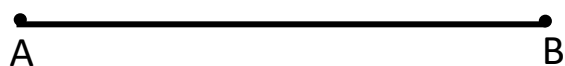


CLASS	VI
SUBJECT	MATHS
TOPIC	UNDERSTANDING ELEMENTARY SHAPES
SUBTOPIC	LINE SEGMENTS – COMPARING & MEASURING
NO. OF SESSIONS	1

Introduction:

Line Segment:

We have already learnt in the previous chapter that a line segment is a fixed portion of a line. As it is fixed, so we can measure it and this measurement of a line segment is known as its **length**.



This is a line segment and we name it as \overline{AB} .

Comparison of Line Segments:

Suppose we have two line segments with us, say \overline{AB} and \overline{CD} . We can compare these line segments by a number of methods:

i. Comparison by observation:

The first and the easiest method to compare two line segments is simple observation. Just by looking at the two line segments, we can tell which one is greater.



Here, we can easily tell that \overline{CD} is greater than \overline{AB} .

But what about the following line segments?

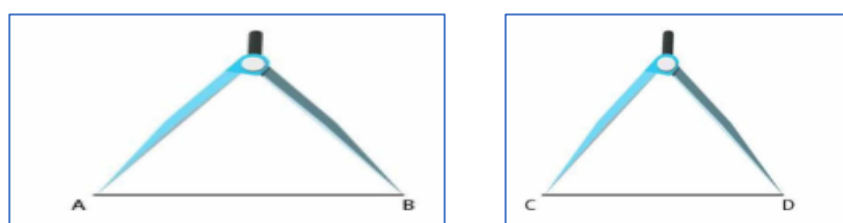


ii. Comparison by tracing:

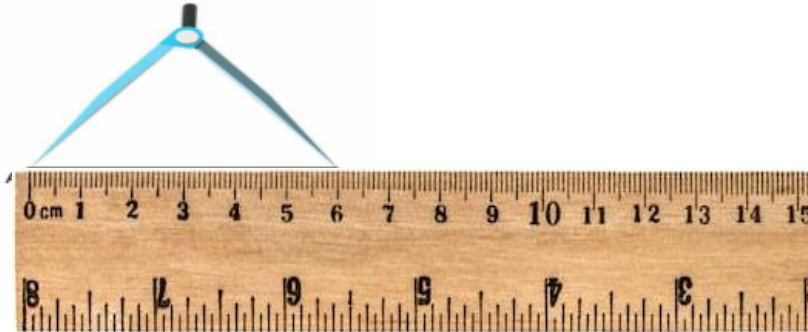
To compare \overline{AB} and \overline{CD} , we trace \overline{CD} on a tracing paper and place it on \overline{AB} . So, with this method you will be able to get to know which line segment is longer and which one is shorter.

But, can you exactly tell how much longer one line segment is than the other one?

iii. Comparison by using ruler and a divider:



A divider is a geometrical instrument with two arms having magnetic needles at their ends. Place one needle of the divider at point A and other at B and then place it along the ruler keeping one needle at zero mark of the ruler.



So $\overline{AB} = 6\text{cm}$. Similarly, we can measure the length of $\overline{CD} = 4.8\text{cm}$ and we can say that \overline{AB} is greater than \overline{CD} by 1.2cm.

Example 1: If P, Q, R are three points lying on a line such that $\overline{PQ} = 2\text{cm}$, $\overline{QR} = 8\text{cm}$ and $\overline{PR} = 6\text{cm}$. Which point lies between the other two?

Sol: It is clear that $\overline{QR} = \overline{PQ} + \overline{PR}$

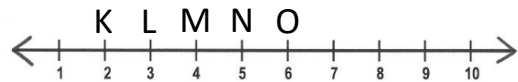
So, point P lies between Q and R.

Example 2: Is M mid-point of \overline{KO} ? Verify.

Sol: As $\overline{KM} = 2$ units

$$\overline{MO} = 2 \text{ units}$$

So, M is the mid-point of \overline{KO} .



Assignment:

Q1: Draw a line segment \overline{AB} .

- (i) Take a point C lying on \overline{AB} such that $\overline{AB} = \overline{AC} + \overline{CB}$.
- (ii) Take a point D lying on \overline{AB} such that $\overline{BD} = \overline{AD} - \overline{AB}$.

Q2: Draw a quadrilateral and draw any one diagonal. Name the triangles formed and show that in any triangle, sum of any two sides is equal to the third side.

Homework:

Do Ex-5.1 from NCERT book.