



NCERT SOLUTIONS FOR CLASS 6 MATHS UNDERSTANDING ELEMENTARY SHAPES EX 5.1

Exercise 5.1

Question 1:

What is the disadvantage in comparing line segments by mere observation?

Answer:

By mere observation, we cannot be absolutely sure about the judgement. When we compare two line segments of almost same lengths, we cannot be sure about the line segment of greater length. Therefore, it is not an appropriate method to compare line segments having a slight difference between their lengths. This is the disadvantage in comparing line segments by mere observation.

Question 2:

Why is it better to use a divider than a ruler, while measuring the length of a line segment?

Answer:

It is better to use a divider than a ruler because while using a ruler, positioning error may occur due to the incorrect positioning of the eye.

Question 3:

Draw any line segment, say \overline{AB} . Take any point C lying in between A and B. Measure the lengths of AB, BC and AC. Is $AB = AC + CB$?

[Note: If A, B, C are any three points on a line such that $AC + CB = AB$, then we can be sure that C lies between A and B]

Answer:

It is given that point C is lying somewhere in between A and B. Therefore, all these points are lying on the same line segment \overline{AB} . Hence, for every situation in which point C is lying in between A and B, it may be said that $AB = AC + CB$.

For example,

\overline{AB} is a line segment of 6 cm and C is a point between A and B, such that it is 2 cm away from point B. We can find that the measure of line segment \overline{AC} comes to 4 cm. Hence, relation $AB = AC + CB$ is verified.

Question 4:

If A, B, C are three points on a line such that $AB = 5$ cm, $BC = 3$ cm and $AC = 8$ cm, which one of them lies between the other two?

Answer:

Given that,

$AB = 5$ cm

$BC = 3$ cm

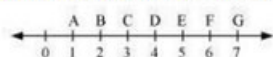
$AC = 8$ cm

It can be observed that $AC = AB + BC$

Clearly, point B is lying between A and C.

Question 5:

Verify, whether D is the mid point of \overline{AG} .



Answer:

From the given figure, it can be observed that

$$\overline{AD} = 4 - 1 = 3 \text{ units}$$

$$\overline{DG} = 7 - 4 = 3 \text{ units}$$

$$\overline{AG} = 7 - 1 = 6 \text{ units}$$

Clearly, D is the mid-point of AG.

Question 6:

If B is the mid point of \overline{AC} and C is the mid point of \overline{BD} , where A, B, C, D lie on a straight line, say why $AB = CD$?

Answer:



Since B is the mid-point of AC,

$$AB = BC \text{ (1)}$$

Since C is the mid-point of BD,

$$BC = CD \text{ (2)}$$

From equation (1) and (2), we may find that

$$AB = CD$$

***** END *****