

# Mathematics

(Chapter – 5) (Understanding Elementary Shapes)

(Class – VI)

## Exercise 5.1

### Question 1:

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

### Answer 1:

There may be chance of error due to improper viewing.

### Question 2:

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

### Answer 2:

It is better to use a divider than a ruler, because the thickness of the ruler may cause difficulties in reading off her length. However divider gives up accurate measurement.

### 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 3:

Yes.



$$AB = 6.5 \text{ cm}, AC = 3 \text{ cm}, CB = 3.5 \text{ cm}$$

$$AC + CB = 3 \text{ cm} + 3.5 \text{ cm} = 6.5 \text{ cm} = AB$$

### Question 4:

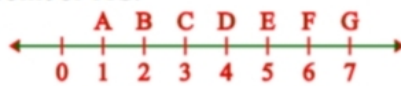
If A, B, C are three points on a line such that  $AB = 5 \text{ cm}$ ,  $BC = 3 \text{ cm}$  and  $AC = 8 \text{ cm}$ , which one of them lies between the other two?

### Answer 4:

$\overline{AC}$  is the longest line segment, thus B is the point between A and C.

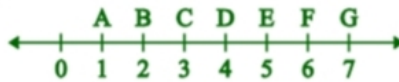
### Question 5:

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



### Answer 5:

AD = 3 units, DG = 3 units



AD = DG.

Thus, D is the mid-point.

### 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 6:

B is the mid-point of  $\overline{AC}$ .

$\therefore AB = BC$  ... (i)

And C is the mid-point of  $\overline{BD}$ .

$\therefore BC = CD$  ... (ii)

From equation (i) and (ii), we get

$AB = CD$

### Question 7:

Draw five triangles and measure their sides. Check in each case, of the sum of the lengths of any two sides is always less than the third side.

### Answer 7:

No, sum of two sides of a triangle is always greater than the third side.

