

NCERT Solutions for Class 6th Maths Chapter 5
Understanding Elementary Shapes
Exercise 5.1

Question 1:

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

Solution:

This will lead us to miscalculations, which we don't want.

Question 2:

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

Solution:

The thickness of ruler may cause inconvenience, while measuring the line segment.

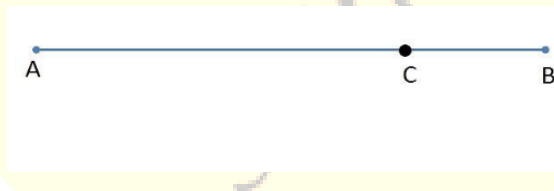
Question 3:

Draw any line segment, say 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.]

Solution:

As it is given in the question that C lies between the points A and B, $AC + CB = AB$,



Measure AC, CB and AB.

AC = 6 cm

CB = 2 cm

AB = 8 cm

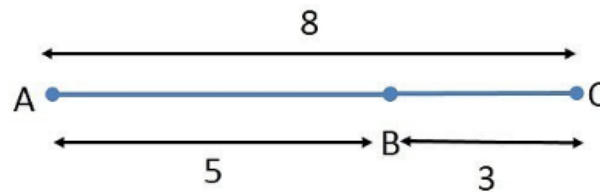
Thus, $AC + CB = AB$

Question 4:

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

Solution:

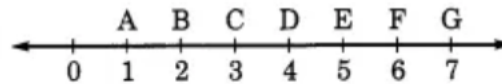
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As, it can be seen that $AC = AB + BC$, it can be said that B lies between A and C.

Question 5:

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



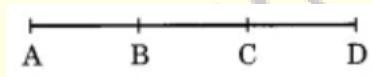
Solution:

From the given figure we can see that, $AD = 3$ units and $DG = 3$ units, so we can say that 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 $AB = CD$?

Solution:



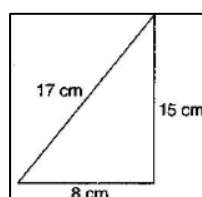
If B is the mid-point then, $AB = BC$ and C is the mid-point so, $BC = CD$. Thus, as we can see $BC = CD$ and also $AB = BC$. So, $AB = BC = CD$.

Question 7:

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

Solution:

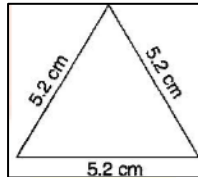
(i)



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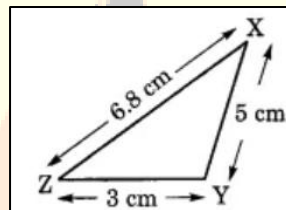
The sum of the two sides is always greater than the third side.

(ii)



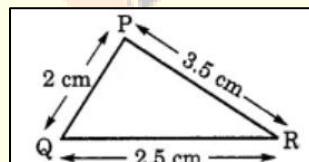
The sum of the two sides is always greater than the third side.

(iii)



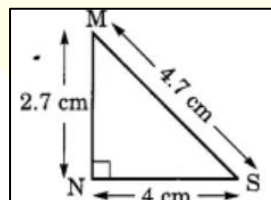
The sum of the two sides is always greater than the third side.

(iv)



The sum of the two sides is always greater than the third side.

(v)



The sum of the two sides is always greater than the third side.