

EXERCISE 19.1

1. Construct line segments whose lengths are:

- (i) 4.8 cm
- (ii) 12 cm 5 mm
- (iii) 7.6 cm

Solution:

(i) 4.8 cm

Construct a line L on a paper and mark A on it.

Now place the metal point of the compass at zero mark of the ruler.

Make adjustments in the compass such that the pencil point is at 4.8 cm mark on the ruler.

Take compass on L such that its metal point is on A.

Now mark a small mark as B on L which is corresponding to the pencil point of the compass.

Here, AB is the required line segment of length 4.8 cm.



(ii) 12 cm 5 mm

Construct a line L on a paper and mark A on it.

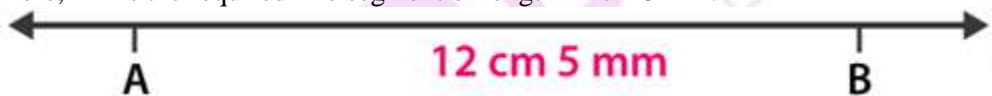
Now place the metal point of the compass at zero mark of the ruler.

Make adjustments in the compass such that the pencil point is at 5 small points from the mark of 12 cm to 13 cm on the ruler.

Take compass on L such that its metal point is on A.

Now mark a small mark as B on L which is corresponding to the pencil point of the compass.

Here, AB is the required line segment of length 12 cm 5 mm.



(iii) 7.6 cm

Construct a line L on a paper and mark A on it.

Now place the metal point of the compass at zero mark of the ruler.

Make adjustments in the compass such that the pencil point is at 6 small points from the mark of 7 cm to 8 cm of the ruler.

Take compass on L such that its metal point is on A.

Now mark a small mark as B on L which is corresponding to the pencil point of the compass.

Here, AB is the required line segment of length 7.6 cm.



2. Construct two segments of length 4.3 cm and 3.2 cm. Construct a segment whose length is equal to the sum of the lengths of these segments.

Solution:

With the help of compass and ruler, construct AB and CD of lengths 4.3 cm and 3.2 cm.

Construct a line L and mark P on it.

Now place the metal point of the compass at zero mark of the ruler.

Make adjustments in the compass such that the pencil point reaches the point B.

Take compass on L such that its metal point is on P.

Now mark a small mark as Q on the line L corresponding to the pencil point of the compass.

Reset the compass so that its metal and pencil points are on C and D.

Take compass on L such that its metal point is on Q and the pencil point makes a small mark as R which is opposite to P on L.

Here, PR is the required segment whose length is equal to the sum of the lengths of these segments.

