

CHAPTER – 14

Practical Geometry

EXERCISE – 14.2

Q. 1

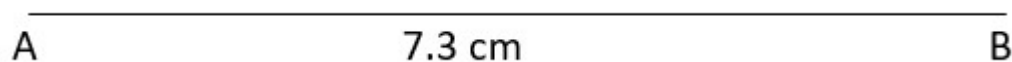
Draw a line segment of length 7.3 cm, using a ruler.

Answer:

Steps of Construction-

Find 7.3 cm in the ruler and draw a line of its length.

Name it as AB.



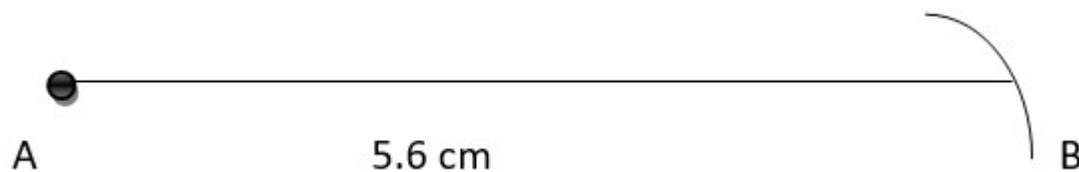
Q. 2

Construct a line segment of length 5.6 cm, using ruler and compasses.

Answer:

Steps of Construction-

1. Take a measure of 5.6 cm in a compass using ruler.
2. Draw a point A. Keeping needle of compass on A, draw an arc and mark it as B. Connect A and B.



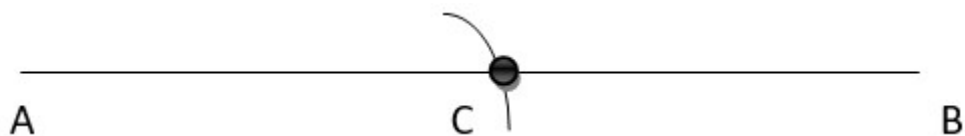
Q. 3

Construct \overline{AB} of length 7.8 cm. From this, cut off \overline{AC} of length 4.7 cm. Measure \overline{BC} .

Answer:

Steps of Construction-

1. Draw a line segment AB of length 7.8 cm using a ruler.
2. Take a measure of 4.7 cm from a ruler on compass and draw an arc on AB naming it as C.
3. Measure BC. $BC = 3.1$ cm



Q. 4

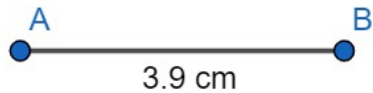
Given \overline{AB} of length 3.9 cm, construct \overline{PQ} such that the length of \overline{PQ} is twice that of \overline{AB} . Verify by measurement.



Answer:

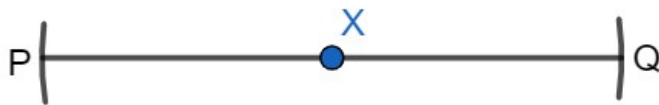
Steps of Construction-

1. Draw a line segment AB of length 3.9 cm using a ruler.



2. Take a measure of it on the compass and mark a point X.

3. Draw arcs on both sides of X with the same measure in compass and join them named as P and Q.



4. Measure PQ. $PQ = 7.8$ cm

Q. 5

Given \overline{AB} of length 7.3 cm and \overline{CD} of length 3.4 cm, construct a line segment \overline{XY} such that the length of \overline{XY} is equal to the difference between the lengths \overline{AB} , \overline{AB} and \overline{CD} . Verify by measurement.

Answer:

Steps of Construction-

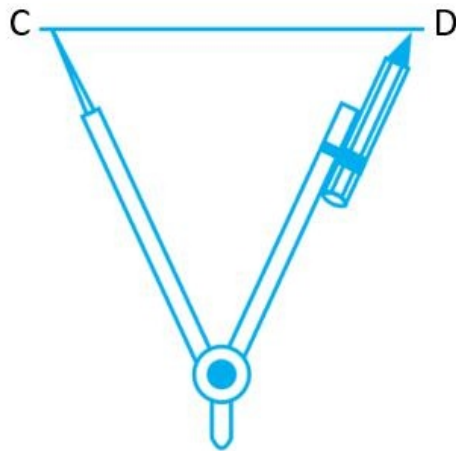
1. Draw two lines AB and CD such that $AB = 7.3$ cm and $CD = 3.4$ cm

A 7.3 cm B

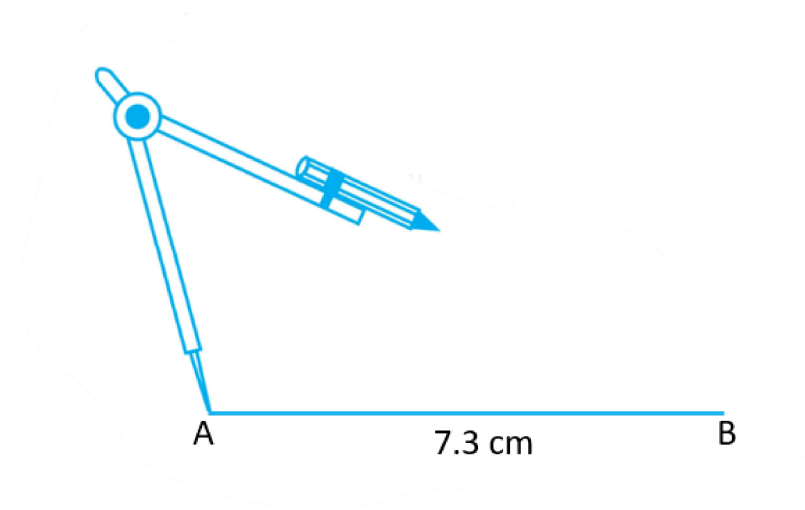
C 3.4 cm D

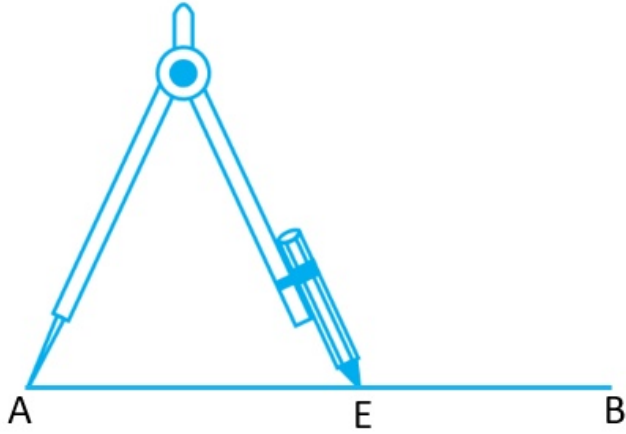
2. Fix the compass pointer on C and the pencil end on D, the compass now has length

of CD



3. Fix the compass pointer on A and swing an arc that cuts AB at E





4. EB is the difference of AB and CD Verification: $AB - CD = 7.3 - 3.4 = 3.9$ cm On measuring $EB = 3.9$ cm