

## Practical Geomentry (constructions) Ex 18.1 Q1

First, we draw a rough sketch of the quadrilateral ABCD and write down its dimensions along the sides.

We may divide the quadrilateral into two constructible triangles ABD and BCD. Steps of Construction:

Step I: Draw BD = 6.6 cm

Step II: With B as the centre and radius  $\mathrm{BC}=4~\mathrm{cm},$  draw an arc.

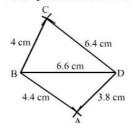
Step III : With D as the centre and radius 6.4 cm, draw an arc to intersect the arc drawn in Step II at C.

Step IV: With B as the centre and radius 4.4 cm, draw an arc on the side BD opposite to that of C.

Step V: With D as the centre and radius 3.8 cm, draw an arc to intersect the arc drawn in Step IV at A.

Step VI: Join BA, DA, BC and CD

The quadrilateral ABCD so obtained is the required quadrilateral.



## Practical Geomentry (constructions) Ex 18.1 Q2

Answer:

Steps of construction:

Step I: Draw AB = 5.5 cm

Step II: With B as the centre and radius BC = 5.5 cm, draw an arc.

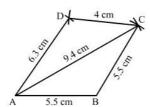
Step III : With A as the centre and radius AC = 9.4 cm, draw an arc to intersect the arc drawn in Step II at C.

Step IV: With C as the centre and radius CD = 4 cm, draw an arc.

Step V: With A as the centre and radius AD=6.3 cm, draw an arc to intersect the arc drawn in Step IV at D.

Step VI: Join DA, BC, AC and CD.

The quadrilateral ABCD so obtained is the required quadrilateral.



Practical Geomentry (constructions) Ex 18.1 Q3

## Answer:

Steps of construction:

Step I: Draw XZ = 9 cm

Step II: With X as the centre and radius 5 cm, draw an arc above XZ.

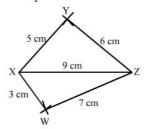
Step III: With Z as the centre and radius 6 cm, draw an arc to intersect the arc drawn in Step II at Y above XZ.

Step IV: With Z as the centre and radius 7 cm, draw an arc below XZ.

Step V: With X as the centre and radius 3 cm, draw an arc to intersect the arc drawn in Step IV at W below XZ.

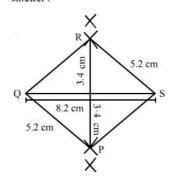
Step VI: Join XY, YZ, ZW and XW.

The quadrilateral WXYZ so obtained is the required quadrilateral.



Practical Geomentry (constructions) Ex 18.1 Q4

Answer:



In a parallelogram opposite sides are equal. Thus, we have to construct a quadrilateral PQRS in which

PQ = 5.2 cm, PR = 6.8 cm and QS = 8.2 cm.

Steps of construction:

Step I: Draw QS = 8.2 cm

Step II: With Q as the centre and radius  $5.2~\mathrm{cm},~\mathrm{draw}$  an arc.

Step III: With S as the centre and radius  $5.2~\mathrm{cm},$  draw an arc to intersect the arc drawn in Step II at C.

Step IV: With P as the centre and radius 6.8 cm.

Step V: With Q as the centre and radius  $5.2~\mathrm{cm}$ , draw an arc to intersect the arc drawn in Step IV at A.

Step VI: Join QR, QP, PS and SR.

The quadrilateral PQRS so obtained is the required quadrilateral.

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