



### Practical Geometry (constructions) Ex 18.1 Q1

Answer :

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  $BC = 4$  cm, draw an arc.

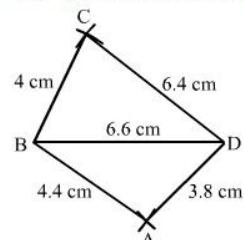
Step III : With D as the centre and radius  $6.4$  cm, draw an arc to intersect the arc drawn in Step II at C.

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 Geometry (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.

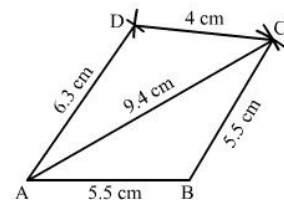
Step III : With A as the centre and radius  $AC = 9.4$  cm, draw an arc to intersect the arc drawn in Step II at C.

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 Geometry (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.

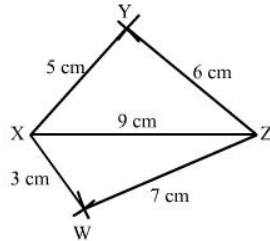
Step III : With Z as the centre and radius 6 cm, draw an arc to intersect the arc drawn in Step II at Y above XZ.

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.

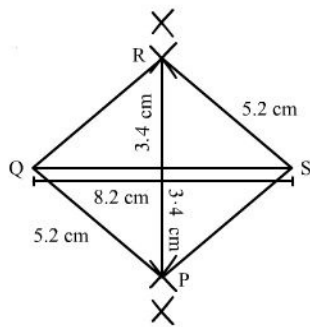
Step VI : Join XY, YZ, ZW and XW.

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 cm, draw an arc.

Step III : With S as the centre and radius 5.2 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 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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