

Mathematics

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(Chapter – 4) (Practical Geometry)

(Class – VIII)

Exercise 4.1

Question 1:

Construct the following quadrilaterals:

- (i) Quadrilateral ABCD
AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm, AC = 7 cm
- (ii) Quadrilateral JUMP
JU = 3.5 cm, UM = 4 cm, MP = 5 cm, PJ = 4.5 cm, PU = 6.5 cm
- (iii) Parallelogram MORE
OR = 6 cm, RE = 4.5 cm, EO = 7.5 cm
- (iv) Rhombus BEST
BE = 4.5 cm, ET = 6 cm

Answer 1:

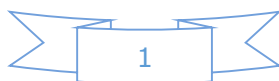
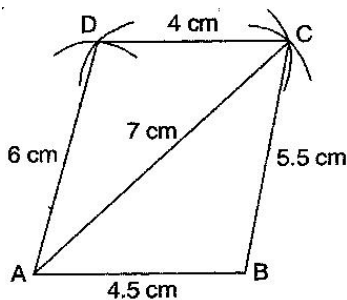
- (i) **Given:** AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm, AC = 7 cm

To construct: A quadrilateral ABCD

Steps of construction:

- (a) Draw AB = 4.5 cm.
- (b) Draw an arc taking radius 5.5 cm from point B.
- (c) Taking radius 7 cm, draw another arc from point A which intersects the first arc at point C.
- (d) Join BC and AC.
- (e) Draw an arc of radius 6 cm from point A and draw another arc of radius 4 cm from point C which intersects at D.
- (f) Join AD and CD.

It is required quadrilateral ABCD.



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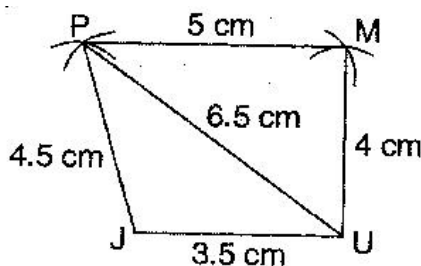
(ii) **Given:** $JU = 3.5$ cm, $UM = 4$ cm, $MP = 5$ cm, $PJ = 4.5$ cm, $PU = 6.5$ cm

To construct: A quadrilateral JUMP

Steps of construction:

- Draw $JU = 3.5$ cm.
- Draw an arc of radius 4.5 cm taking centre J and then draw another arc of radius 6.5 cm taking U as centre. Both arcs intersect at P.
- Join PJ and PU.
- Draw arc of radius 5 cm and 4 cm taking P and U as centres respectively, which intersect at M.
- Join MP and MU.

It is required quadrilateral JUMP.



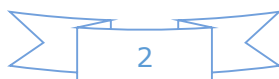
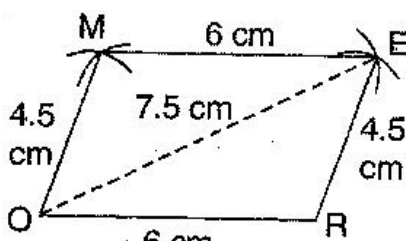
(iii) **Given:** $OR = 6$ cm, $RE = 4.5$ cm, $EO = 7.5$ cm

To construct: A parallelogram MORE.

Steps of construction:

- Draw $OR = 6$ cm.
- Draw arcs of radius 7.5 cm and radius 4.5 cm taking O and R as centres respectively, which intersect at E.
- Join OE and RE.
- Draw an arc of 6 cm radius taking E as centre.
- Draw another arc of 4.5 cm radius taking O as centre, which intersects at M.
- Join OM and EM.

It is required parallelogram MORE.



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(iv) **Given:** $BE = 4.5$ cm, $ET = 6$ cm

To construct: A rhombus BEST.

Steps of construction:

- Draw $TE = 6$ cm and bisect it into two equal parts.
- Draw up and down perpendiculars to TE .
- Draw two arcs of 4.5 cm taking E and T as centres, which intersect at S .
- Again draw two arcs of 4.5 cm taking E and T as centres, which intersect at B .
- Join TS , ES , BT and EB .

It is the required rhombus BEST.

