

CLASS NOTES-ANSWERS

EXERCISE 4.2

1. Construct the following quadrilaterals.

(i) quadrilateral LIFT

$$LI = 4 \text{ cm}$$

$$IF = 3 \text{ cm}$$

$$TL = 2.5 \text{ cm}$$

$$LF = 4.5 \text{ cm}$$

$$IT = 4 \text{ cm}$$

(ii) Quadrilateral GOLD

$$OL = 7.5 \text{ cm}$$

$$GL = 6 \text{ cm}$$

$$GD = 6 \text{ cm}$$

$$LD = 5 \text{ cm}$$

$$OD = 10 \text{ cm}$$

(iii) Rhombus BEND

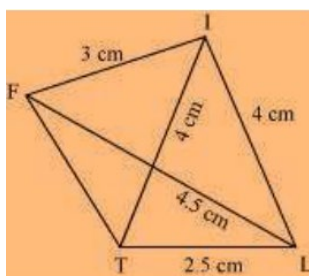
$$BN = 5.6 \text{ cm}$$

$$DE = 6.5 \text{ cm}$$



Answer:

(i) Rough sketch:

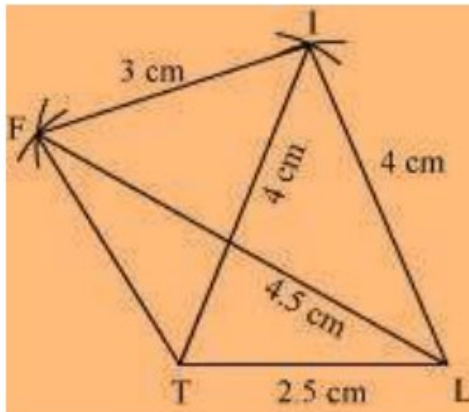


Steps of Construction:

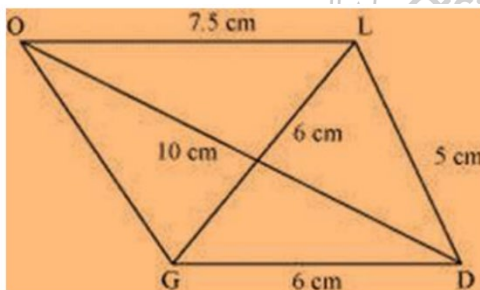
- Construct ΔITL by using the given measurements
- Vertex F is 4.5 cm away from vertex L and 3 cm away from vertex I. While taking L and I as centres, draw arcs of 4.5 cm radius and 3 cm

radius, respectively, which will intersect each other at point F.

- Join F to T and F to I.
- LIFT is the required quadrilateral.

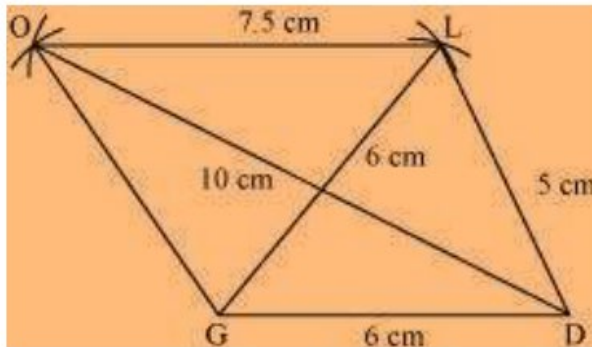


(ii) Rough sketch:



Steps of Construction:

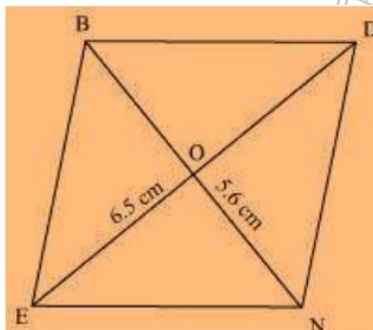
- Construct ΔGDL by using the given measurements
- Vertex O is 10 cm away from vertex D and 7.5 cm away from vertex L. Therefore, while taking D and L as centres, draw arcs of 10 cm radius and 7.5 cm radius, respectively. These will intersect each other at point O.
- Join O to G and L.
- GOLD is the required quadrilateral.



(iii) The diagonals of a rhombus always bisect each other at 90° .

Let us assume that these are intersecting each other at point O in this rhombus. Hence, $EO = OD = 3.25$ cm

Rough sketch:



Steps of Construction:

- Draw a line segment BN of 5.6 cm, and also draw its perpendicular bisector. Let it intersect the line segment BN at point O.
- Taking O as the centre, draw arcs of 3.25 cm radius to intersect the perpendicular bisector at points D and E.
- Join points D and E to points B and N.
- BEND is the required quadrilateral.

