Exercise 4.2   Page: 62

1. Construct the following quadrilaterals.
    (i) Quadrilateral LIFT
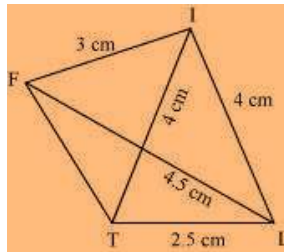   LI = 4 cm
        IF = 3 cm
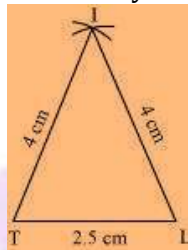   TL = 2.5 cm
        LF = 4.5 cm
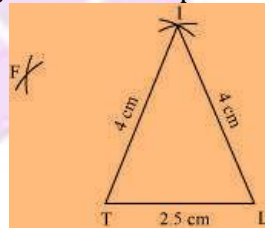   IT = 4 cm
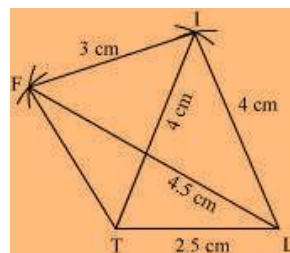Solution:A rough sketch of the quadrilateral LIFT can be drawn as follows.

    (1) Δ ITL can be constructed by using the given measurements as follows.

    (2) 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 be intersecting each other at point F.
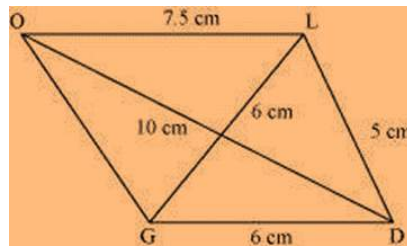

    (3) Join F to T and F to I.

        LIFT is the required quadrilateral.
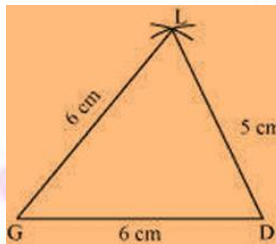
(ii) Quadrilateral GOLD
OL = 7.5 cm
GL = 6 cm
GD = 6 cm
LD = 5 cm
OD = 10 cm

Solution:

The rough sketch of the quadrilateral GOLD can be drawn as follows.

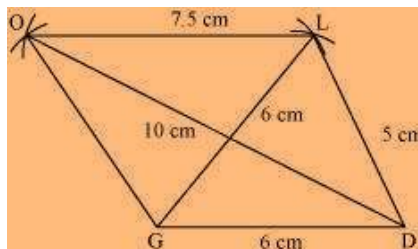(1) Δ GDL can be constructed by using the given measurements as follows.

(2) 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.
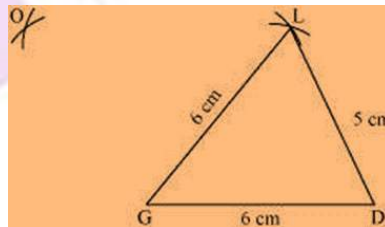
(3) Join O to G and L.

GOLD is the required quadrilateral.

(iii) Rhombus BEND
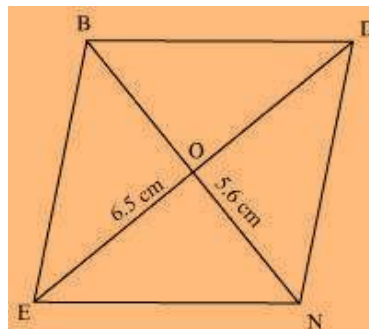
  BN = 5.6 cm

  DE = 6.5 cm

Solution:

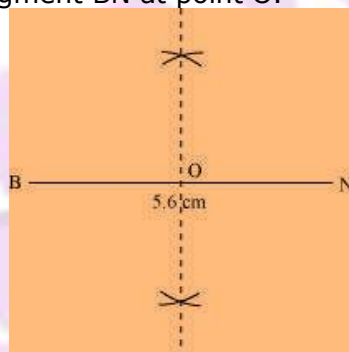We know that the diagonals of a rhombus always bisect each other at 90º.

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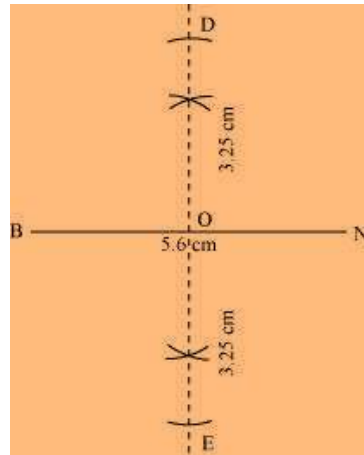
Hence, EO = OD = 3.25 cm

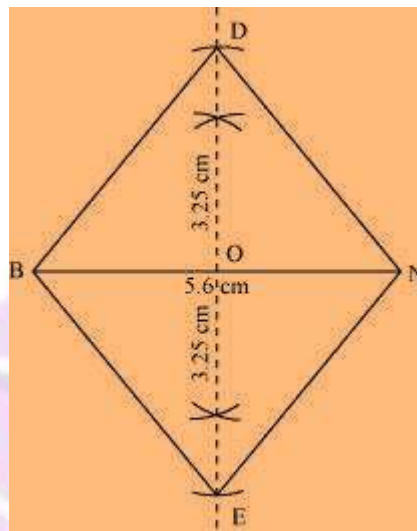The rough sketch of the rhombus BEND can be drawn as follows.

(1) 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.

(2) Taking O as centre, draw arcs of 3.25 cm radius to intersect the perpendicular bisector at point D and E.

(3) Join points D and E to points B and N.

BEND is the required quadrilateral.