



SpeedLabs

MATHS

CBSE 8th

TEEVRA EDUTECH PVT. LTD.

Exercise-4.3

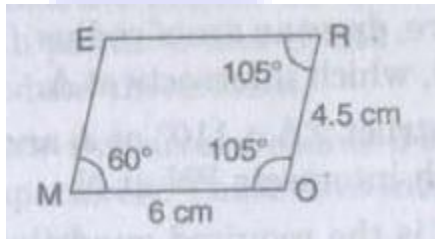
Q.1 Construct the following quadrilaterals.

Sol:

(i) Quadrilateral MORE

$MO = 6 \text{ cm}$, $OR = 4.5 \text{ cm}$, $\angle M = 60^\circ$, $\angle O = 105^\circ$, $\angle R = 105^\circ$

Rough sketch of MORE



Steps of construction:

Step 1. Draw a line-segment $MO = 6 \text{ cm}$.

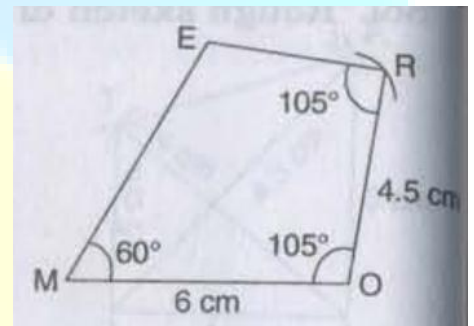
Step 2. Construct $\angle O = 105^\circ$ and taking radius 4.5 cm , draw an arc taking O as a centre, which intersects at R .

Step 3. Now, construct angle 105° at R and produce the side RE .

Step 4. Construct another angle 60° at point M and produce its side ME .

Both sides ME and RE intersect at E .

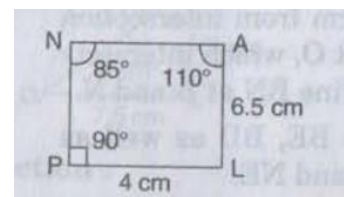
MORE is the required quadrilateral.



(ii) Quadrilateral PLAN

$PL = 4 \text{ cm}$, $LA = 6.5 \text{ cm}$, $\angle P = 90^\circ$, $\angle A = 110^\circ$, $\angle N = 85^\circ$

Rough sketch of PLAN



Before constructing this figure, we must get the value of

$$\angle L = 360^\circ - (90^\circ + 85^\circ + 110^\circ)$$

$$= 360^\circ - 285^\circ = 75^\circ$$

Steps of construction:

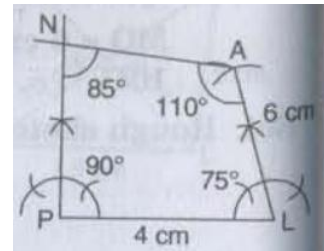
Step 1. Draw a line segment of $PL = 4 \text{ cm}$.

Step 2. Construct angle 90° at P and produce the side PN

Step 3. Construct another angle of 75° at L and with L as centre, draw an arc of radius 6 cm, which intersects at A.

Step 4. Construct $\angle A = 110^\circ$ at A and produce the side AN which intersects PN at N.

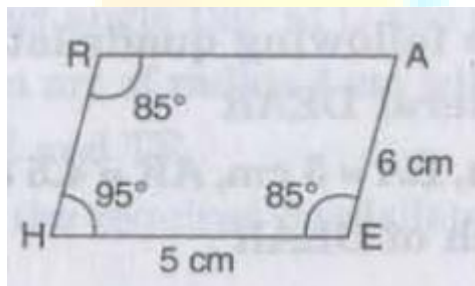
Hence, PLAN is the required quadrilateral.



(iii) Parallelogram HEAR

$$HE = 5 \text{ cm}, EA = 6 \text{ cm}, \angle R = 85^\circ$$

Rough sketch of HEAR



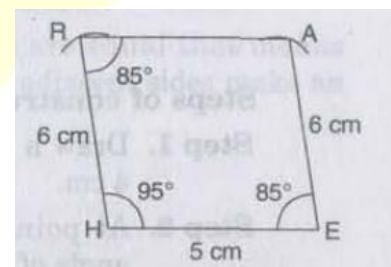
$$\angle H = 180^\circ - 85^\circ = 95^\circ \text{ (as sum of adjacent angle is } 180^\circ)$$

Steps of construction:

Step 1. Draw a line segment $HE = 5 \text{ cm}$.

Step 2. Construct $\angle H = 95^\circ$ and draw an arc of radius 6 cm with centre H.

It intersects AR at R and join RH.



Step 3. Draw $\angle R = \angle E = 85^\circ$ and draw an arc of radius 6 cm. with E as a centre which intersects RA at A.

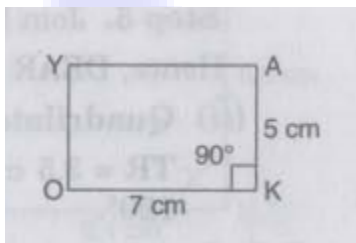
Step 4. Join RA.

Hence, HEAR is the required parallelogram.

(iv) Rectangle OKAY

OK = 7 cm, KA = 5 cm

Rough sketch of OKAY



As we know that each angle of a rectangle is 90° , having opposite sides equal.

Steps of construction:

Step 1. Draw a line segment $OK = 7\text{cm}$.

Step 2. Construct angles 90° at both points O and K and produce these sides.

Step 3. Draw two arcs of radius 5 cm from points O and K respectively.

These arcs intersect at Y and A.

Step 4. Join YA.

OKAY is the required rectangle.

