

CBSE Class –VIII Mathematics
NCERT Solutions
CHAPTER - 4
Practical Geometry (Ex. 4.3)

1. Construct the following quadrilaterals:

(i) Quadrilateral MORE

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

(ii) Quadrilateral PLAN

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

(iii) Parallelogram HEAR

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

(iv) Rectangle OKAY

OK = 7 cm, KA = 5 cm

Ans. (i) Given: MO = 6 cm, OR = 4.5 cm,

$\angle M = 60^\circ$, $\angle O = 105^\circ$, $\angle R = 105^\circ$

To construct: A quadrilateral MORE

Steps of construction:

(a) Draw a line segment MO = 6 cm.

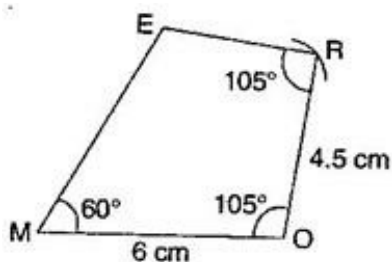
(b) Construct $\angle R = 105^\circ$ and taking radius 4.5 cm, draw an arc taking O as centre, which intersects at R.

(c) Also construct an angle 105° at R and produce the side RE.

(d) Construct another angle of 60° at point M and produce the side ME. Both sides ME and RE

intersect at E.

It is the required quadrilateral MORE.



(ii) Given: $PL = 4 \text{ cm}$, $LA = 6.5 \text{ cm}$,

$\angle P = 90^\circ$, $\angle A = 110^\circ$, $\angle N = 85^\circ$

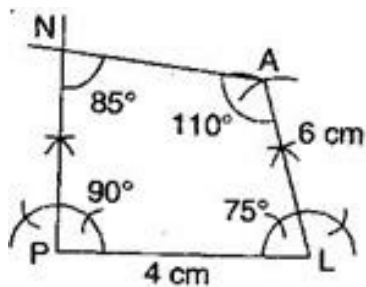
To construct: A quadrilateral PLAN

To find: $\angle L = 360^\circ - (90^\circ + 85^\circ + 110^\circ) = 360^\circ - 285^\circ = 75^\circ$

Steps of construction:

- Draw a line segment $PL = 4 \text{ cm}$.
- Construct angle of 90° at P and produce the side PN.
- Construct angle of 75° at L and with L as centre, draw an arc of radius 6 cm, which intersects at A.
- Construct $\angle A = 110^\circ$ at A and produce the side AN which intersects PN at N.

It is the required quadrilateral PLAN.



(iii) Given: $HE = 5 \text{ cm}$, $EA = 6 \text{ cm}$, $\angle R = 85^\circ$

To construct: A parallelogram HEAR

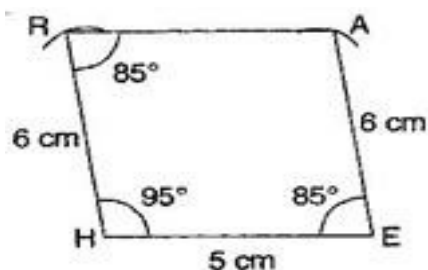
To find: $\angle H = 180^\circ - 85^\circ = 95^\circ$

[\because Sum of adjacent angle of \parallel^{gm} is 180°]

Steps of construction:

- Draw a line segment $HE = 5$ cm.
- Construct $\angle H = 95^\circ$ and draw an arc of radius 6 cm with centre H. It intersects AR at R.
- Join RH.
- 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.
- Join RA.

It is the required parallelogram HEAR.



(iv) Given: $OK = 7$ cm, $KA = 5$ cm

To construct: A rectangle OKAY

Steps of construction:

- Draw a line segment $OK = 7$ cm.
- Construct angle 90° at both points O and K and produce these sides.
- Draw two arcs of radius 5 cm from points O and K respectively. These arcs intersect at Y and A.
- Join YA.

It is the required rectangle OKAY.

