



NCERT Solutions for class 8 Maths chapter 4 Practical Geometry Ex-4.3

**Q1. 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**

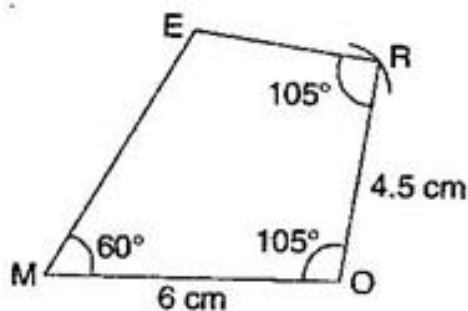
OK = 7 cm, KA = 5 cm

**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  $MO = 6 \text{ cm}$ .

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

(c) Also construct an angle  $105^\circ$  at  $R$  and produce the side  $RE$ .

(d) Construct another angle of  $60^\circ$  at point  $M$  and produce the side  $ME$ . Both sides  $ME$  and  $RE$  intersect at  $E$ .

It is the required quadrilateral  $MORE$ .

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

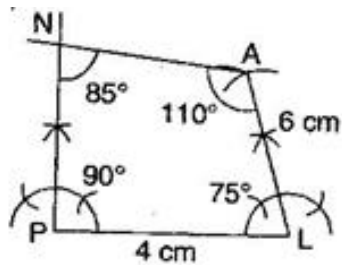
$\angle P = 90^\circ$ ,  $\angle A = 110^\circ$ ,  $\angle N = 85^\circ$

**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:**



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

It is the required quadrilateral PLAN.

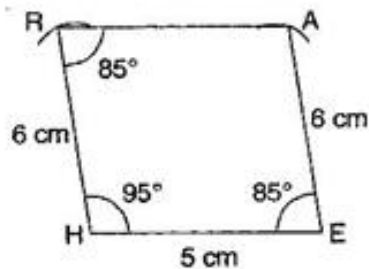
**(iii) Given:**  $HE = 5 \text{ cm}$ ,  $EA = 6 \text{ cm}$ ,  
 $\angle R = 85^\circ$

**To construct:** A parallelogram HEAR.

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

[ $\because$  Sum of adjacent angle of  $\parallel$  gm is  $180^\circ$ ]

**Steps of construction:**



(a) Draw a line segment  $HE = 5 \text{ cm}$ .

(b) Construct  $\angle H = 95^\circ$  and draw an arc of radius 6 cm with centre H. It intersects AR at R.

(c) Join RH.

(d) 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.

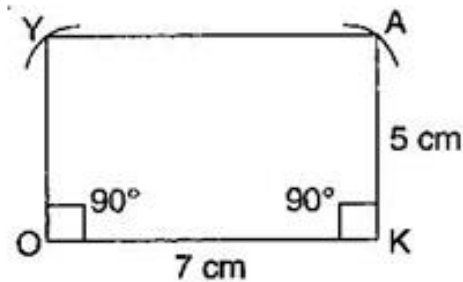
(e) Join RA

It is the required parallelogram HEAR.

**(iv) Given:**  $OK = 7 \text{ cm}$ ,  $KA = 5 \text{ cm}$

**To construct:** A rectangle OKAY.

**Steps of construction:**



(a) Draw a line segment  $OK = 7 \text{ cm}$ .

(b) Construct angle  $90^\circ$  at both points O and K and produce these sides.

(c) Draw two arcs of radius 5 cm from points O and K respectively. These arcs intersect at Y and A.

(d) Join YA.

It is the required rectangle OKAY.

\*\*\*\*\* END \*\*\*\*\*