

**CHAPTER- 4**  
**(PRACTICAL GEOMETRY)**  
**EXERCISE :- 4.1**

## Question :- 1

Construct the following quadrilaterals:

(i) Quadrilateral ABCD

$AB = 4.5 \text{ cm}$ ,  $BC = 5.5 \text{ cm}$ ,  $CD = 4 \text{ cm}$ ,  $AD = 6 \text{ cm}$ ,  $AC = 7 \text{ cm}$

(ii) Quadrilateral JUMP

$JU = 3.5 \text{ cm}$ ,  $UM = 4 \text{ cm}$ ,  $MP = 5 \text{ cm}$ ,  $PJ = 4.5 \text{ cm}$ ,  $PU = 6.5 \text{ cm}$

(iii) Parallelogram MORE

$OR = 6 \text{ cm}$ ,  $RE = 4.5 \text{ cm}$ ,  $EO = 7.5 \text{ cm}$

(iv) Rhombus BEST

$BE = 4.5 \text{ cm}$ ,  $ET = 6 \text{ cm}$

# Solution :-

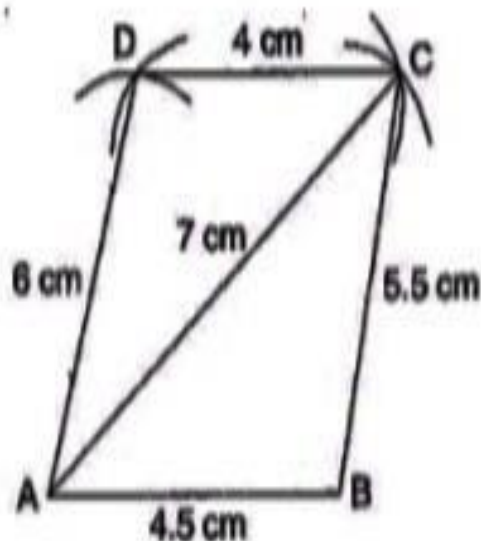
(i) **Given:**  $AB = 4.5 \text{ cm}$ ,  $BC = 5.5 \text{ cm}$ ,  $CD = 4 \text{ cm}$ ,  $AD = 6 \text{ cm}$ ,  $AC = 7 \text{ cm}$

**To construct:** A quadrilateral ABCD

**Steps of construction:**

- (a) Draw  $AB = 4.5 \text{ cm}$ .
- (b) Draw an arc taking radius  $5.5 \text{ cm}$  from point B.
- (c) Taking radius  $7 \text{ cm}$ , draw another arc from point A which intersects the first arc at point C.
- (d) Join BC and AC.
- (e) Draw an arc of radius  $6 \text{ cm}$  from point A and draw another arc of radius  $4 \text{ cm}$  from point C which intersects at D.
- (f) Join AD and CD.

It is required quadrilateral ABCD.



(ii) **Given:**  $JU = 3.5$  cm,  $UM = 4$  cm,  $MP = 5$  cm,  $PJ = 4.5$  cm,  $PU = 6.5$  cm

**To construct:** A quadrilateral JUMP

**Steps of construction:**

(a) Draw  $JU = 3.5$  cm.

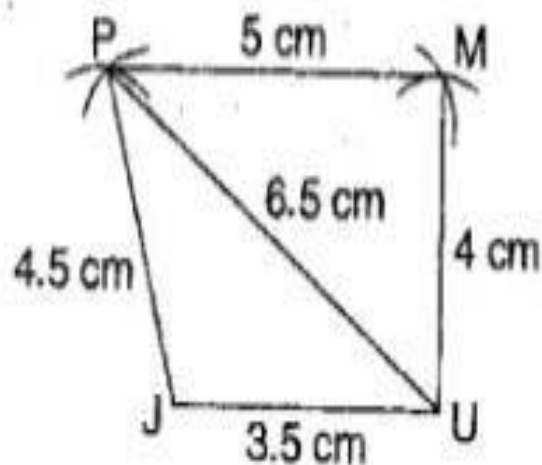
(b) Draw an arc of radius 4.5 cm taking centre J and then draw another arc of radius 6.5 cm taking U as centre. Both arcs intersect at P.

(c) Join PJ and PU.

(d) Draw arc of radius 5 cm and 4 cm taking P and U as centres respectively, which intersect at M.

(e) Join MP and MU.

It is required quadrilateral JUMP.



(iii) **Given:**  $OR = 6\text{ cm}$ ,  $RE = 4.5\text{ cm}$ ,  $EO = 7.5\text{ cm}$

**To construct:** A parallelogram MORE.

**Steps of construction:**

(a) Draw  $OR = 6\text{ cm}$ .

(b) Draw arcs of radius  $7.5\text{ cm}$  and radius  $4.5\text{ cm}$  taking  $O$  and  $R$  as centres respectively, which intersect at  $E$ .

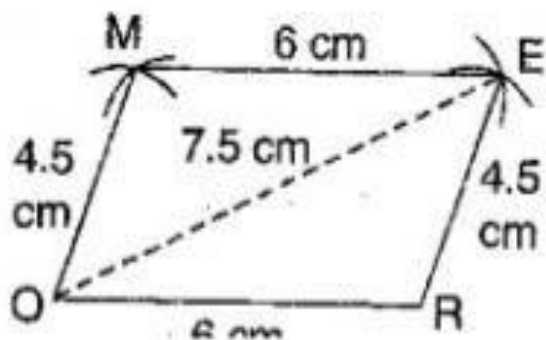
(c) Join  $OE$  and  $RE$ .

(d) Draw an arc of  $6\text{ cm}$  radius taking  $E$  as centre.

(e) Draw another arc of  $4.5\text{ cm}$  radius taking  $O$  as centre, which intersects at  $M$ .

(f) Join  $OM$  and  $EM$ .

It is required parallelogram MORE.



(iv) **Given:**  $BE = 4.5 \text{ cm}$ ,  $ET = 6 \text{ cm}$

**To construct:** A rhombus BEST.

**Steps of construction:**

- (a) Draw  $TE = 6 \text{ cm}$  and bisect it into two equal parts.
- (b) Draw up and down perpendiculars to  $TE$ .
- (c) Draw two arcs of  $4.5 \text{ cm}$  taking  $E$  and  $T$  as centres, which intersect at  $S$ .
- (d) Again draw two arcs of  $4.5 \text{ cm}$  taking  $E$  and  $T$  as centres, which intersect at  $B$ .
- (e) Join  $TS$ ,  $ES$ ,  $BT$  and  $EB$ .

It is the required rhombus BEST.

