NCERT Solutions for class 8 Maths chapter 4 Practical Geometry Ex 4.1

Q1. Construct the following quadrilaterals:

(i) Quadrilateral ABCD

AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm,

AD = 6 cm, AC = 7 cm

(ii) Quadrilateral JUMP

JU = 3.5 cm, UM = 4 cm, MP = 5 cm,

PJ = 4.5 cm, PU = 6.5 cm

(iii) Parallelogram MORE

OR = 6 cm, RE = 4.5 cm, EO = 7.5 cm

(iv) Rhombus BEST

BE = 4.5 cm, ET = 6 cm

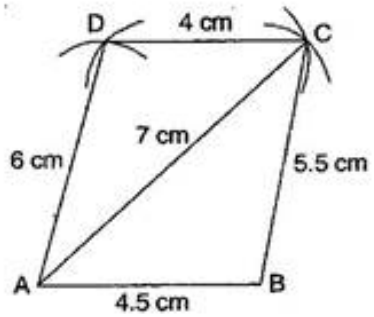
Ans:

(i) Given: AB = 4.5 cm, BC = 5.5 cm,

CD = 4 cm, AD = 6 cm, AC = 7 cm

To construct: A quadrilateral ABCD

Steps of construction:



(a) Draw AB = 4.5 cm.

(b) Draw an arc taking radius 5.5 cm from point B.

(c) Taking radius 7 cm, draw an 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 cm from point A and draw another arc of radius 4 cm from point C which intersects at D.

(f) Join AD and CD.

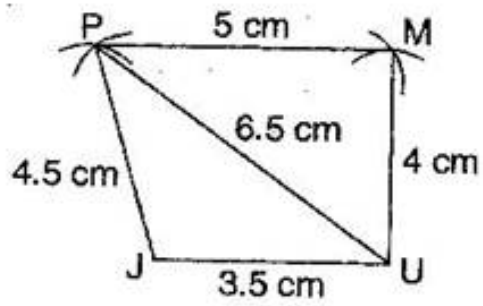
It is required quadrilateral ABCD.

(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.

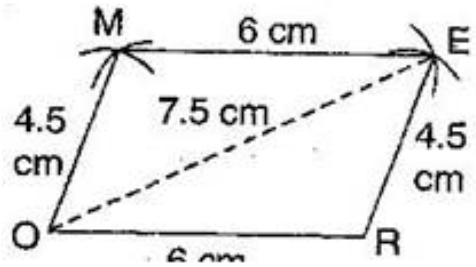
It is required quadrilateral JUMP.

(iii) Given: OR = 6 cm, RE = 4.5 cm,

EO = 7.5 cm

To construct: A parallelogram MORE.

Steps of construction:



(a) Draw OR = 6 cm.

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

(c) Join OE and RE.

(d) Draw an arc of 6 cm radius taking E as centre.

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

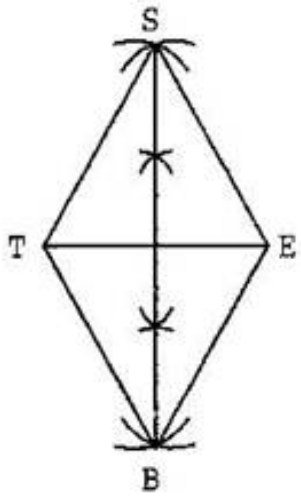
(f) Join OM and EM.

It is required parallelogram MORE.

(iv) Given: BE = 4.5 cm, ET = 6 cm

To construct: A rhombus BEST.

Steps of construction:



(a) Draw TE = 6 cm and bisect it into two equal parts.

(b) Draw up and down perpendiculars to TE.

(c) Draw two arcs of 4.5 cm taking E and T as centres, which intersect at S.

(d) Again draw two arcs of 4.5 cm taking E and T as centres, which intersects at B.

(e) Join TS, ES, BT and EB.

It is the required rhombus BEST.

********** END **********