

EXERCISE 4.5

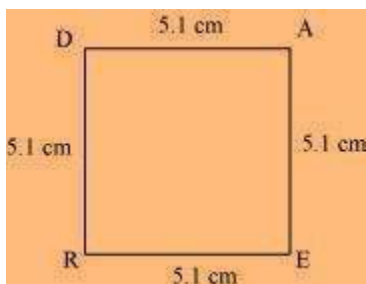
PAGE NO: 68

Draw the following:

1. The square READ with $RE = 5.1$ cm

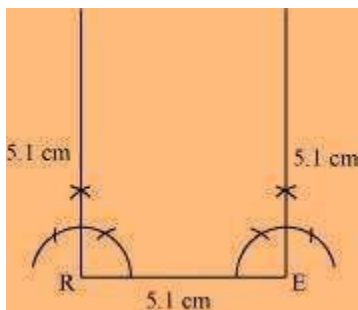
Solution:

All the sides of a square are of the same measure, and also, all the interior angles of a square are 90° measure. Therefore, the given square READ can be drawn as follows.

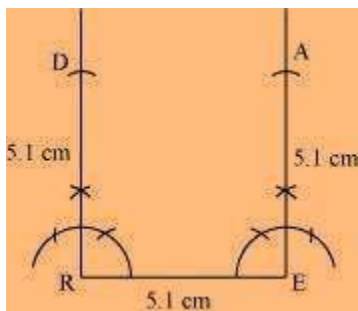


Rough Figure:

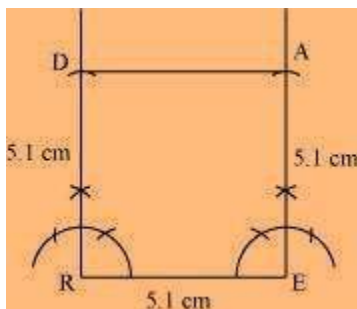
(1) Draw a line segment RE of 5.1 cm and an angle of 90° at points R and E.



(2) As vertex A and D are 5.1 cm away from vertex E and R, respectively, cut line segments EA and RD, each of 5.1 cm from these rays.



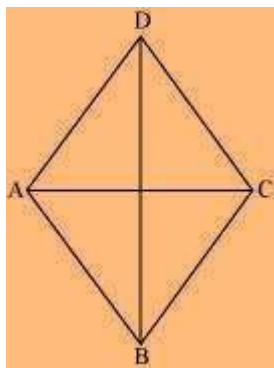
(3) Join D to A.



READ is the required square.

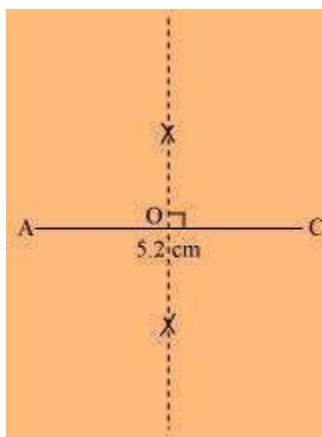
2. A rhombus whose diagonals are 5.2 cm and 6.4 cm long. Solution:

In a rhombus, diagonals bisect each other at 90° . \therefore , the given rhombus ABCD can be drawn as follows.

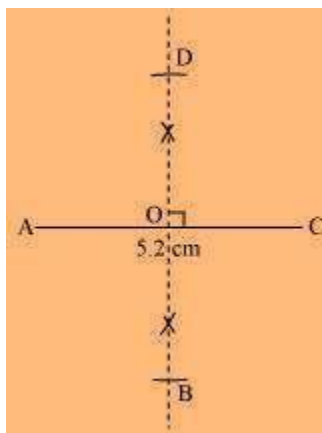


Rough Figure:

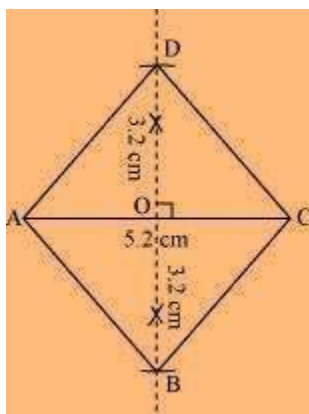
(1) Draw a line segment AC of 5.2 cm and draw its perpendicular bisector. Let it intersect the line segment AC at point O.



(2) Draw arcs of $6.4/2 = 3.2$ on both sides of this perpendicular bisector. Let the arcs intersect the perpendicular bisector at points B and D.



(3) Join points B and D with points A and C.

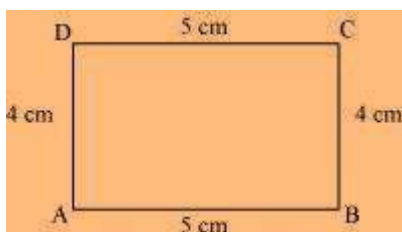


ABCD is the required rhombus.

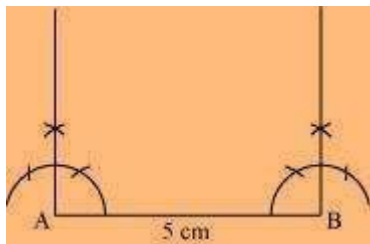
3. A rectangle with adjacent sides of length 5 cm and 4 cm. Solution:

Opposite sides of a rectangle have lengths of the same measure, and also, all the interior angles of a rectangle are 90° measure. The given rectangle ABCD may be drawn as follows.

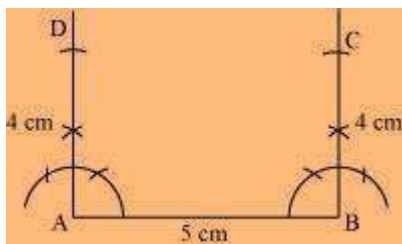
Rough figure:



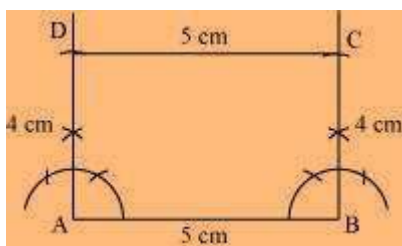
(1) Draw a line segment AB of 5 cm and an angle of 90° at points A and B.



(2) As vertex C and D are 4 cm away from vertex B and A, respectively, cut line segments AD and BC, each of 4 cm, from these rays.



(3) Join D to C.

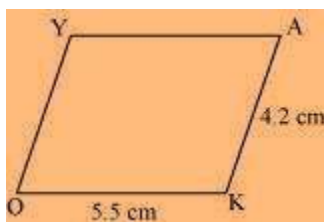


ABCD is the required rectangle.

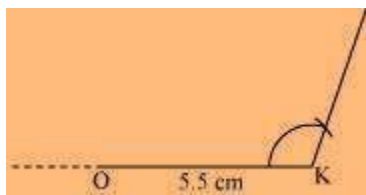
4. A parallelogram OKAY where $OK = 5.5$ cm and $KA = 4.2$ cm. Solution:

Opposite sides of a parallelogram are equal and parallel to each other. The given parallelogram OKAY can be drawn as follows.

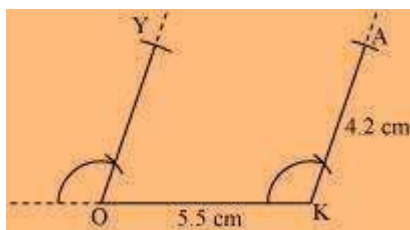
Rough Figure:



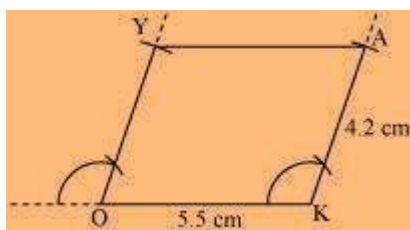
(1) Draw a line segment OK of 5.5 cm and a ray at point K at a convenient angle.



(2) Draw a ray at point O parallel to the ray at K. As the vertices A and Y are 4.2 cm away from the vertices K and O, respectively, cut line segments KA and OY, each of 4.2 cm, from these rays.



(3) Join Y to A.



OKAY is the required rectangle.