

**CBSE Class 8 Mathematics**

**NCERT Solutions**

**CHAPTER 4**

**Practical Geometry (Ex. 4.5)**

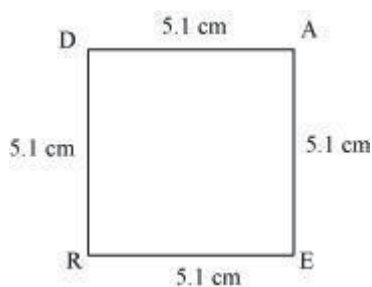
**Q1 : Draw the following:**

**The square READ with RE = 5.1 cm**

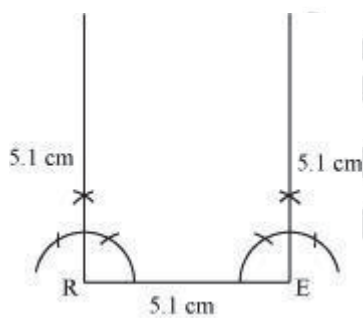
Answer :

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

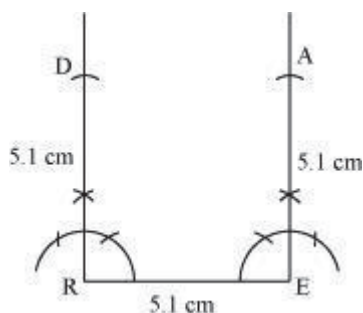
(1) A rough sketch of this square READ can be drawn as follows.



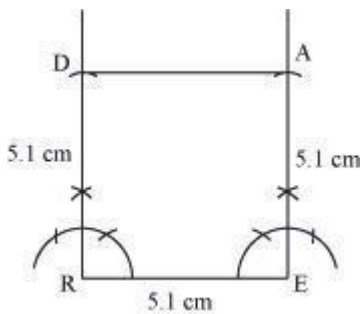
(2) Draw a line segment RE of 5.1 cm and an angle of  $90^\circ$  at point R and E.



(3) 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.



(4) Join D to A.



READ is the required square.

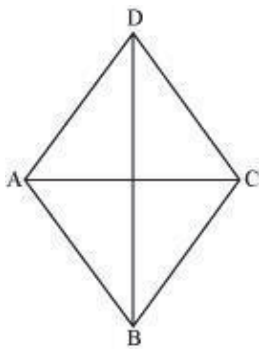
**Q2 : Draw the following:**

**A rhombus whose diagonals are 5.2 cm and 6.4 cm long.**

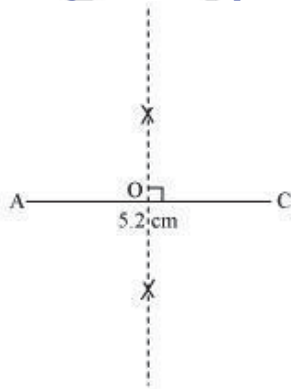
Answer :

In a rhombus, diagonals bisect each other at  $90^\circ$ . Therefore, the given rhombus ABCD can be drawn as follows.

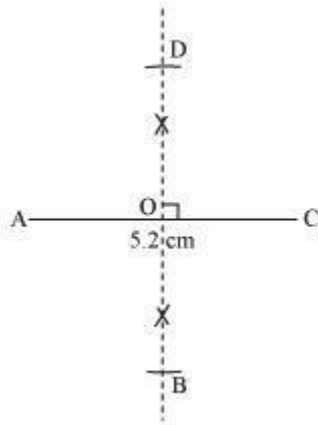
(1) A rough sketch of this rhombus ABCD is as follows.



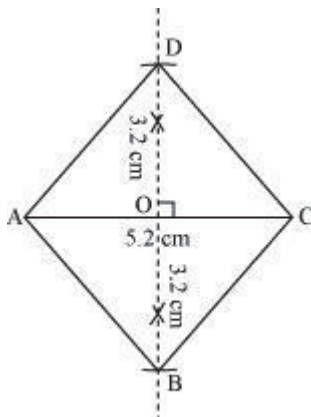
(2) Draw a line segment AC of 5.2 cm and draw its perpendicular bisector. Let it intersect the line segment AC at point O.



- (3) Draw arcs of  $\frac{6.4 \text{ cm}}{2} = 3.2 \text{ cm}$  on both sides of this perpendicular bisector. Let the arcs intersect the perpendicular bisector at point B and D.



- (4) Join points B and D with points A and C.



ABCD is the required rhombus.

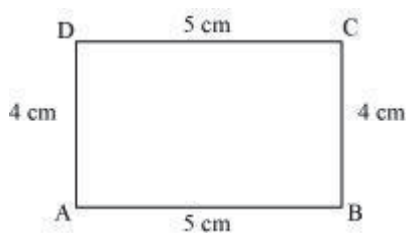
**Q3 : Draw the following:**

**A rectangle with adjacent sides of length 5 cm and 4 cm.**

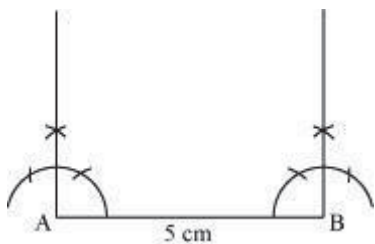
Answer :

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

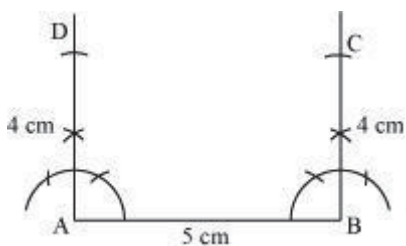
- (1) A rough sketch of this rectangle ABCD can be drawn as follows.



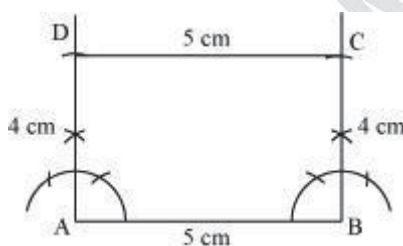
(2) Draw a line segment AB of 5 cm and an angle of  $90^\circ$  at point A and B.



(3) 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.



(4) Join D to C.



ABCD is the required rectangle.

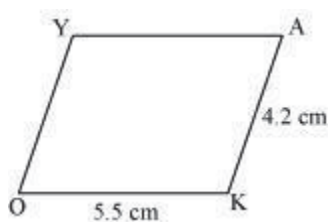
**Q4 : Draw the following:**

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

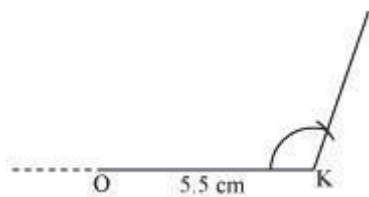
Answer :

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

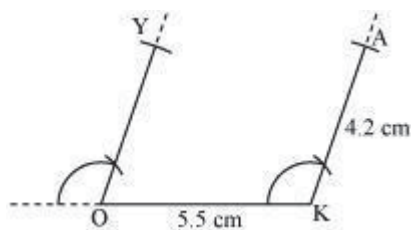
(1) A rough sketch of this parallelogram OKAY is drawn as follows.



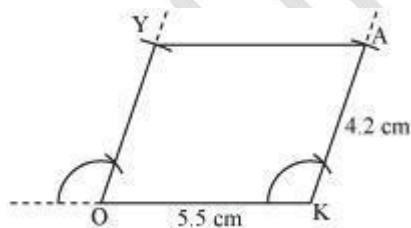
(2) Draw a line segment OK of 5.5 cm and a ray at point K at a convenient angle.



(3) 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.



(4) Join Y to A.



OKAY is the required parallelogram.