

CONSTRUCTIONS

Activity – 11

1. What we have to do?

To draw a pair of tangents from a point P outside the circle drawn using a bangle.

2. What is required?

A sheet of paper, geometry box and a bangle

3. Time required: 30 min

4. What do we need to know?

Drawing of perpendicular bisector of a line, a right angle

5. How will you proceed?

- 1) Draw a circle using a bangle.
- 2) Locate the centre O of the circle by drawing the perpendicular bisector of two chords drawn from the three points taken on the circle.
- 3) Join the centre of the circle O with the point P taken outside the circle.
- 4) Draw the perpendicular bisector to get the mid-point of the OP.
- 5) With the point obtained in step 4 above draw a circle passing through the centre and the point taken outside the circle.
- 6) The two points of intersection of the original circle and the circle drawn in the step 5 above A and B (say) are the points of contact.
- 7) Join PA and PB.

6. What we have you observed?

- 1) Length of PA = _____
- 2) Length of PB = _____

7. What have you learnt?

Length of PA _____ Length of PB (< / = / >)

8. What would you be interested in doing?

Draw a right triangle ABC right angled at B with AB = 8 cm, BC = 6 cm. Draw a circle passing through A, B and mid-point P of AC. Then, draw a pair of tangents from the vertex C.

Real Life Application:

The above concept is proving results in Geometry, Physics, Mechanics, Engineering drawing, Economics etc....
