ASSIGNMENT 5

Showqeen Yousuf

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- **Exercise 2.55:**

  Let A and B be the centres of two circles of equal Radii 3 such that each one of them passes through the centre of the other. Let them intersect at C and D. Is AB $\perp CD$:

- **Solution:**

Given, Radii of two circles=3cm

Now,

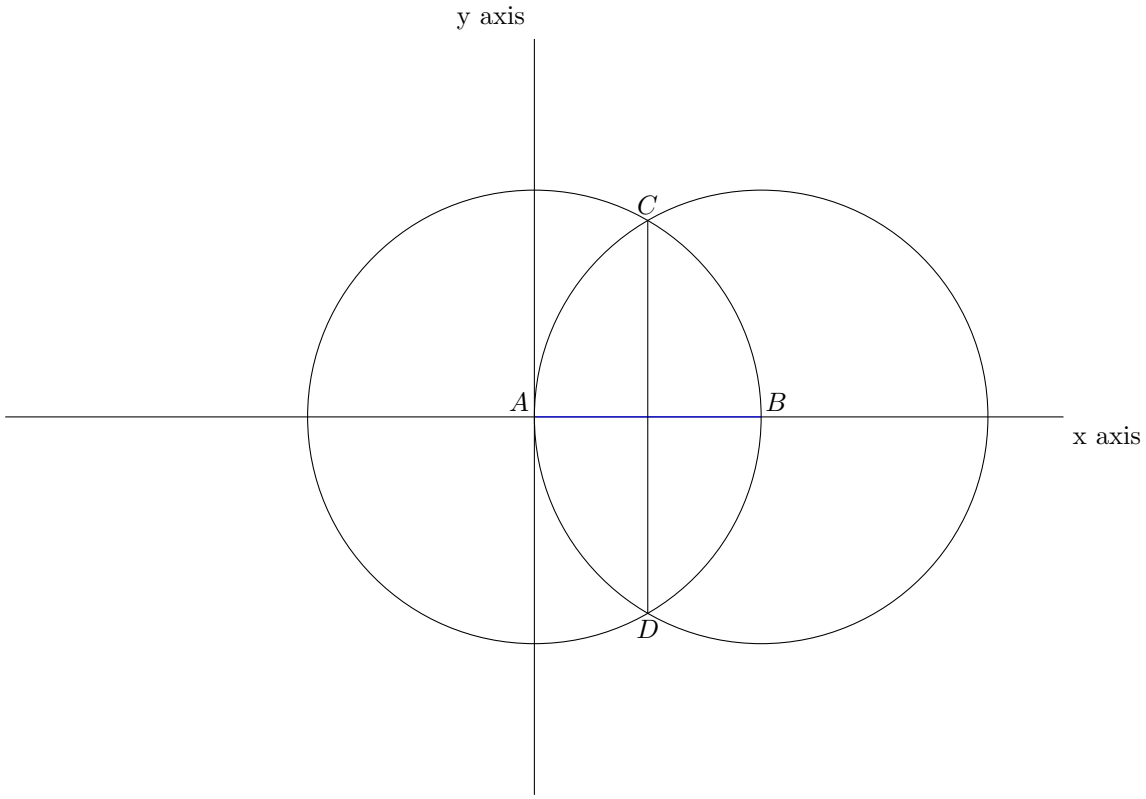
Steps of Construction are:

1: Taking a fixed point A as radius=3cm.

2: Draw a circle O.

3: Again taking any point B on circumference of circle C, with radius=3cm draw another circle,intersecting circle O at points C and D.

4: Join AB and CD.



By Symmetry AB is perpendicular to CD(AB $\perp CD$).

- **Question 2.56:**

  Construct a tangent to a circle of radius 4 units from a point on concentric circle of radius 6 units:

- **Solution:**

  Given the radii of two concentric circles of radius 4 units and 6 units respectively,

  Steps of Construction:

  1: Draw a circle of radius 4 units with centre O.

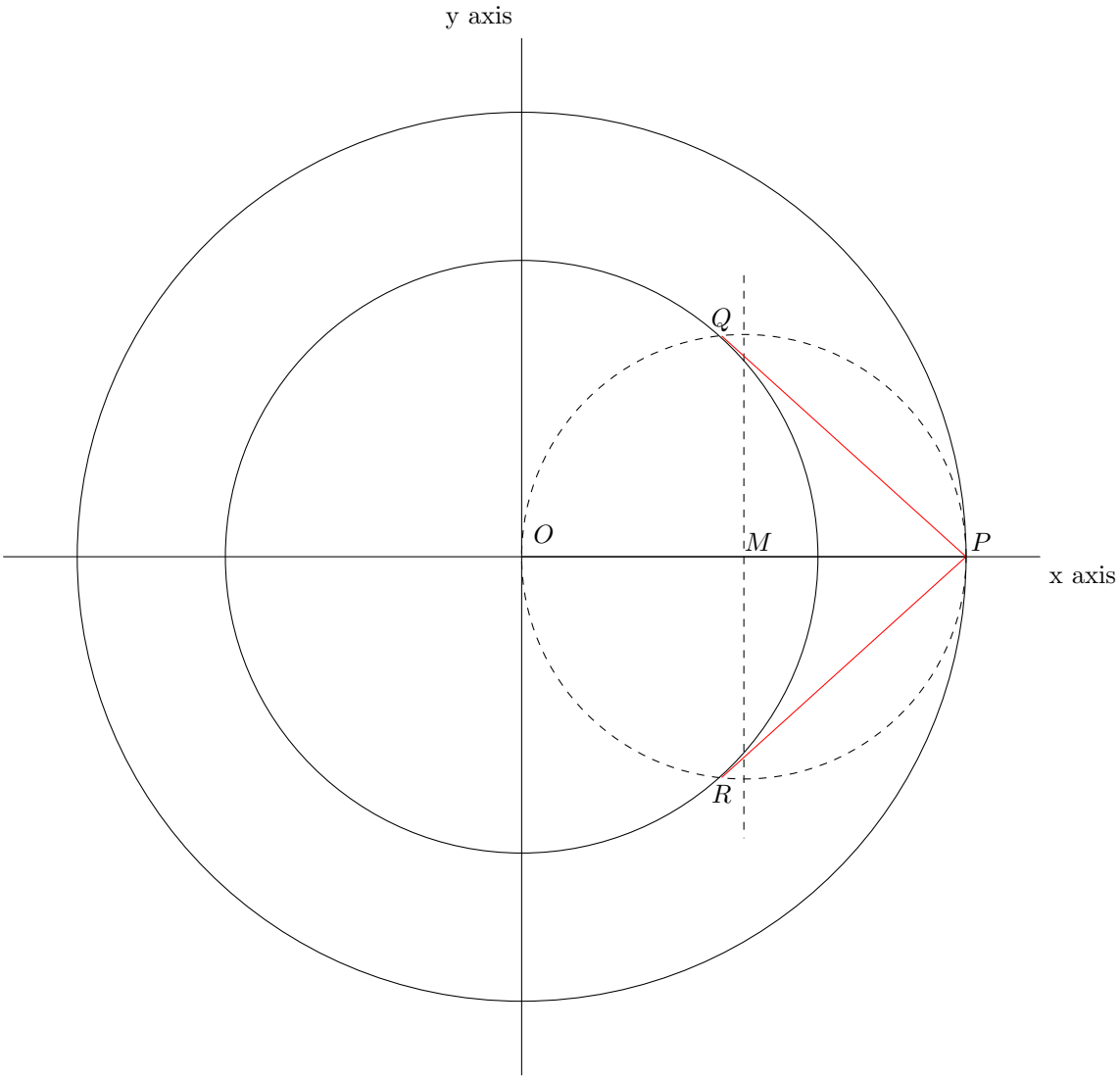
  2: Draw a circle of radius 6 units wit taking O as its centre. Locate a point P on this circle and join OP.

  3: Bisect OP. Let M be the midpoint of PO.

  4: Taking M as its centre and MO as its radius, draw a cricle. Let it intersect the given circle at points Q and R.

  5: Join PQ and PR. PQ and PR are the required tangents.

  From the construction required tangents are given below:



PQ and PR are the two tangents to the internal circle from a point P located on the circumference of outer circle.