Circles - Class XI

Past Year JEE Questions

Questions

Quetion: 01

Choose the incorrect statement about the two circles whose equations are given below :

$x^2 + y^2 - 10x - 10y + 41 = 0$ and

$x^2 + y^2 - 16x - 10y + 80 = 0$

A. Distance between two centres is the average of radii of both the circles.
B. Both circles pass through the centre of each other.
C. Circles have two intersection points.
D. Both circles' centers lie inside region of one another.

Solutions

Solution: 01

Explanation

$S_1 \equiv x^2 + y^2 - 10x - 10y + 41 = 0$

Centre $C_1 \equiv (5, 5)$, radius $r_1 = 3$

$S_2 \equiv x^2 + y^2 - 16x - 10y + 80 = 0$

Centre $C_2 \equiv (8, 5)$, radius $r_2 = 3$

Distance between centres = 3

Hence both circles pass through the centre of each other, have two intersection point and distance between two centres in average of radii of both the circles.