

Circles - Class XI

Related Questions with Solutions

Questions

Question: 01

If two circles $(x - 1)^2 + (y - 3)^2 = r^2$ and $x^2 + y^2 - 8x + 2y + 8 = 0$ intersect in two distinct points then

- A. $2 < r < 8$
- B. $4 < 2$
- C. $r = 2$
- D. $r > 2$

Solutions

Solution: 01

Let d be the distance between the centres of two circles of radii r_1 and r_2 .

These circles intersect at two distinct points if $|r_1 - r_2| < d < r_1 + r_2$.

Here, the radii of the two circles are r and 3 and distance between the centres is 5 .

Thus, $|r - 3| < 5 < r + 3 \Rightarrow -2 < r < 8$ and $r > 2$

$\Rightarrow 2 < r < 8$

Correct Options

Answer:01

Correct Options: A