

Circles - Class XI

Related Questions with Solutions

Questions

Question: 01

The area of the circle $x^2 - 2x + y^2 - 10y + k = 0$ is 25π . The value of k is equal to

Solutions

Solution: 01

Let r be the radius of given circle.

Given, area of circle $x^2 - 2x + y^2 - 10y + k = 0$ is 25π

i.e., $\pi r^2 = 25\pi \Rightarrow r^2 = 25$ [i]

Also, radius from the given equation is

$$r = \sqrt{(1)^2 + (5)^2 - k} \Rightarrow r^2 = 26 - k$$

$$\Rightarrow 25 = 26 - k \text{ [Using (i)]} \Rightarrow k = 1$$

Correct Options

Answer:01

Correct Answer: 1