

## Circles - Class XI

### Related Questions with Solutions

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#### Questions

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##### Question: 01

The equation of two circles which touch the y-axis at (0, 3) and make an intercept of 8 units on x-axis are

- A.  $x^2 + y^2 \pm 10x - 6y + 9 = 0$
- B.  $x^2 + y^2 \pm 6x - 10y + 9 = 0$
- C.  $x^2 + y^2 - 8x \pm 10y + 9 = 0$
- D.  $x^2 + y^2 + 10x \pm 6y + 9 = 0$

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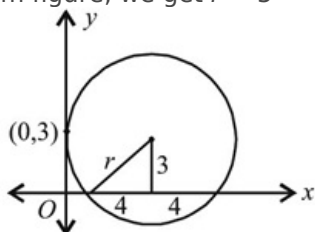
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#### Solutions

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##### Solution: 01

From figure, we get  $r = 5$



So, centre of circle is  $[5, 3]$

Similarly, if circle lies in left of y-axis its centre is  $[-5, 3]$

$\therefore$  Equation of circle of centre  $(5, 3)$  and radius 5 is  $(x - 5)^2 + (y - 3)^2 = 5^2$

$$\Rightarrow x^2 + y^2 - 10x - 6y + 9 = 0$$

and equation of circle of centre  $(-5, 3)$  and radius 5 is  $(x + 5)^2 + (y - 3)^2 = 5^2$

$$\Rightarrow x^2 + y^2 + 10x - 6y + 9 = 0$$

Hence, equation of circle are  $x^2 + y^2 \pm 10x - 6y + 9 = 0$

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#### Correct Options

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Answer:01

Correct Options: A