

Practice Questions

Q1. Find the equation of the circle which touches x-axis and whose centre is (1, 2).

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S1. Since the circle has a centre (1, 2) and also touches x-axis.

Radius of the circle is, $r = 2$

The equation of a circle having centre (h, k), having radius as r units, is

$$(x - h)^2 + (y - k)^2 = r^2$$

So, the equation of the required circle is:

$$(x - 1)^2 + (y - 2)^2 = 2^2$$

$$x^2 - 2x + 1 + y^2 - 4y + 4 = 4$$

$$x^2 + y^2 - 2x - 4y + 1 = 0$$

The equation of the circle is

$$x^2 + y^2 - 2x - 4y + 1 = 0$$