

Equation of a Circle *ramp up*

ANSWERS

a Find the radius of $x^2 + y^2 = 25$ 5 the radius is the square root	b Find the radius of $x^2 + y^2 = 7$ $\sqrt{7}$ a radius that is a surd	c A circle has centre (0, 0) and radius 3. Find its equation. $x^2 + y^2 = 9$ the equation from the radius	d A circle has centre (0, 0) and passes through (1, 3). Find its equation. $x^2 + y^2 = 10$ a circle through a point off the axes
e Is (1, 2) inside, on or outside $x^2 + y^2 = 9$? $inside$ a point inside the circle	f Is (-3, 2) inside, on or outside $x^2 + y^2 = 12$? $outside$ a negative coordinate squared	g Where does $x^2 + y^2 = 36$ meet the x axis? $(-6, 0) \text{ and } (6, 0)$ where the circle meets an axis	h Find the points on $x^2 + y^2 = 25$ where $x = 3$ $(3, 4) \text{ and } (3, -4)$ two points with the same x
i Find the gradient of the radius from (0, 0) to (2, 4) 2 the gradient of a radius	j Find the gradient of the tangent to $x^2 + y^2 = 20$ at (2, 4) $-\frac{1}{2}$ tangent perpendicular to the radius	k Find the equation of the tangent to $x^2 + y^2 = 20$ at (2, 4) $y = -\frac{1}{2}x + 5$ the equation of a tangent	l Find the equation of the tangent to $x^2 + y^2 = 10$ at (-3, 1) $y = 3x + 10$ a tangent at a negative coordinate

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