

CIRCLE (Q 1, PAPER 2)

LESSON NO. 7: PARAMETRIC EQUATIONS

2003

1 (a) For all values of $t \in \mathbf{R}$, the point $\left(\frac{3-3t^2}{1+t^2}, \frac{6t}{1+t^2}\right)$ lies on the circle $x^2 + y^2 = r^2$.

Find r , the radius of the circle.

2002

1 (a) The following parametric equations define a circle: $x = 4 + 3\cos\theta$, $y = -2 + 3\sin\theta$, where $\theta \in \mathbf{R}$. What is the Cartesian equation of the circle?

ANSWERS

2003 1 (a) $r = 3$

2002 1 (a) $(x-4)^2 + (y+2)^2 = 9$