

CIRCLE (Q 1, PAPER 2)

LESSON NO. 2: LINE AND CIRCLE

2006

1 (c) S is the circle $x^2 + y^2 + 4x + 4y - 17 = 0$ and K is the line $4x + 3y = 12$.

- (i) Show that the line K does not intersect S .
- (ii) Find the co-ordinates of the point on S that is closest to K .

2004

1 (b) The point $a(5, 2)$ is on the circle $K: x^2 + y^2 + px - 2y + 5 = 0$.

- (i) Find the value of p .
- (ii) The line $L: x - y - 1 = 0$ intersects the circle K . Find the co-ordinates of the points of intersection.

2001

1 (b) The equation of a circle is $(x+1)^2 + (y-8)^2 = 160$. The line $x - 3y + 25 = 0$ intersects the circle at the points p and q .

- (i) Find the co-ordinates of p and the co-ordinates of q .
- (ii) Investigate if $[pq]$ is a diameter of the circle.

ANSWERS

2006 1 (c) (ii) (2, 1)

2004 1 (b) (i) $p = -6$ (ii) (1, 0), (4, 3)

2001 1 (b) (i) $p(-13, 4)$, $q(11, 12)$ (ii) Yes