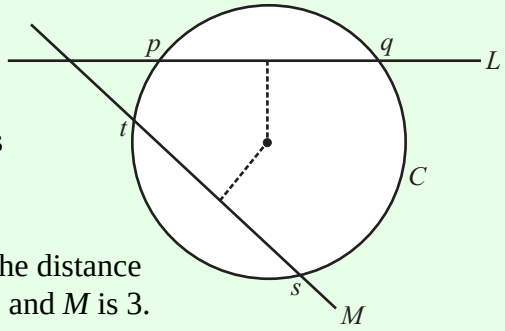
CIRCLE (Q 1, PAPER 2)

LESSON NO. 5: CHORDS

2002

1 (c) The circle C has equation $x^2 + y^2 - 4x + 6y - 12 = 0$. L intersects C at the points p and q. M intersects C at the points t and s. $|pq| = |ts| = 8$.



(i) Find the radius of C and hence show that the distance from the centre of C to each of the lines L and M is 3.

(ii) Given that L and M intersect at the point $(-4, 0)$, find the equations of L and M.

ANSWERS

2002 1 (c) (ii) L: $y = 0$; M: $4x + 3y + 16 = 0$