The Circle (Q 3, Paper 2)

Lesson No. 5: Intersecting the *x*-axis and *y*-axis

2002

3 (b) The circle C has equation $(x-2)^2+(y+1)^2=8$.

(i) Find the coordinates of the two points at which C cuts the y-axis.

(ii) Find the equation of the tangent to C at the point (4, 1).

2000

3 (c) (i) The end points of a diameter of a circle are (– 2, –3) and (– 4, 3).
Find the equation of the circle.

(ii) The circle cuts the y-axis at the points a and b. Find $|ab|$.

(iii) c and d are points on the circle such that $abcd$ is a rectangle.
Find the area of the rectangle $abcd$.

1998

3 (b) The equation of the circle K is $(x-3)^2+(y+2)^2=29$.

(i) Write down the radius length and the coordinates of the centre of K.

(ii) Find the coordinates of the two points where K intersects the x-axis.

1997

3 (a) The equation of a circle is $x^2+y^2=49$.
Write down

(i) its radius length

(ii) the coordinates of the points where it intersects the x-axis.

Answers

2002 3 (b) (i) (0, 1), (0, –3) (ii) $x+y-5=0$

2000 3 (c) (i) $(x+3)^2+y^2=10$ (ii) 2 (iii) 12 units^2

1998 3 (b) (i) $\sqrt{29}$, (3, –2) (ii) (–2, 0), (8, 0)

1997 3 (a) (i) $r = 7$ (ii) (–7, 0), (7, 0)