## The Circle (Q 3, Paper 2)

## Lesson No. 4: Lines intersecting Circles

## 2007

3 (b) The line $x-3 y=0$ intersects the circle $x^{2}+y^{2}=10$ at the points $a$ and $b$.
(i) Find the coordinates of $a$ and the coordinates of $b$.
(ii) Show that [ab] is a diameter of the circle.

## 2005

3 (b) The line $y=10-2 x$ intersects the circle $x^{2}+y^{2}=40$ at the points $a$ and $b$.
(i) Find the coordinates of $a$ and the co-ordinates of $b$.
(ii) Show the line, the circle and the points of intersection on a coordinate diagram.

## 2003

3 (b) The line $x-2 y+5=0$ intersects the circle $x^{2}+y^{2}=10$ at the points $a$ and $b$.
(i) Find the co-ordinates of $a$ and the co-ordinates of $b$.
(ii) Draw a coordinate diagram on graph paper, showing the line, the circle and the points of intersection.

## Answers

20073 (b) (i) $a(-3,-1), b(3,1)$
20053 (b) (i) $a(2,6), b(6,-2)$
(ii)


20033 (b) (i) $a(-3,1), b(1,3)$
(ii)


