1 The centre of a circle is the point with coordinates $(-1, 3)$

The point A with coordinates $(6, 8)$ lies on the circle.

Find an equation of the tangent to the circle at A.
Give your answer in the form $ax + by + c = 0$ where a, b and c are integers.

.....

(Total for Question 1 is 4 marks)

2 A circle has equation $x^2 + y^2 = 12.25$

The point P lies on the circle.
The coordinates of P are (2.1, 2.8)

The line **L** is the tangent to the circle at point P.

Find an equation of **L**.
Give your answer in the form $ax + by = c$, where a, b and c are integers.

.....

(Total for Question 2 is 4 marks)

3 A circle has equation $x^2 + y^2 = 25$

The point P with coordinates (–3, 4) lies on the circle.

Alex says that the tangent to the circle at P crosses the x-axis at the point (–8, 0)

Is Alex correct?
You must show how you get your answer.

(Total for Question 3 is 4 marks)