8 A circle has the equation $x^2 + y^2 + 2x - 10y + 6 = 0$. The centre of the circle is the point C.

(a) Determine the coordinates of C and the exact radius of the circle. **[3]**

(b) Hence show that the circle does **not** cross the x-axis. **[1]**

(c) The tangent to the circle at the point $(3, 7)$ meets the coordinate axes at the points A and B.

Determine the area of the triangle OAB where O is the origin. **[5]**