

5 The equation of a circle is $x^2 + y^2 + 6x - 2y - 10 = 0$.

(i) Find the centre and radius of the circle. **[3]**

(ii) Find the coordinates of any points where the line $y = 2x - 3$ meets the circle $x^2 + y^2 + 6x - 2y - 10 = 0$. **[4]**

(iii) State what can be deduced from the answer to part **(ii)** about the line $y = 2x - 3$ and the circle $x^2 + y^2 + 6x - 2y - 10 = 0$. **[1]**