

2 A circle with centre C has equation $x^2 + y^2 - 6x + 4y + 4 = 0$.

(a) Find

(i) the coordinates of C , **[2]**

(ii) the radius of the circle. **[1]**

(b) Determine the set of values of k for which the line $y = kx - 3$ does not intersect or touch the circle. **[5]**