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DEPARTMENT: BIOTECHNOLOGY

MATRIC NO: 19/SCI17/003

COURSE: MAT 102 ASSIGNMENT

**Question**

(1) Find the Centre and Radius of the circle x2+ y2 + 2x + 6y + 6 = 0

x2+ y2 + 2x + 6y=-6

x^2+2x+y^2+6y=-6

(2/2)^2= 1 (6/2)^2= 9

(x^2+2x+1) + (y^2+6y+9) = -6

(x+1)^2 + (y+3)^2= -6+9+1

(x+1)^2 + (y+3)^2= 4

(x+1) +(y+3) = the root of 4 which is 2

Therefore the center is at (-1, -3) an radius = 2

(2) Find the Centre and Radius of the circle x2+ y2 - 4x + 10y - 8 = 0

x2+ y2 - 4x + 10y= 8

x^2- 4x+ y^2+ 10y= 8

(-4/2)^2=4 (10/2)^2= 25

(x^2-4x+4) + (y^2+ 10y +25)= 8

(x^2- 4x)^2 + (y^2 +10y)^2= 8+4+25

(x^2- 4x)^2 + (y^2 +10y)^2= 37

(x^2- 4x) + (y^2 +10y)= the root of 37

Therefore the center is at (2, -5) and the radius = the root of 37