

Advanced Algebra

Conics: Circles – Homework

Write the given equations of circles in Standard Form and sketch a graph:

1) $x^2 + y^2 - 2x + 6y + 6 = 0$

2) $x^2 + y^2 - 2x + 6y - 15 = 0$

3) $4x^2 + 4y^2 - 4x + 2y - 1 = 0$

From the given information, write the equation of each circle in General Form:

4) Center (2, -1), radius = 4

5) Center (3, -2), and (-1, 1) is a point on the circle

6) Center (2, 3), and the line $x = 5$ is tangent to the circle

7) Find the equation of the line that is tangent to the circle: $x^2 + y^2 - 8x - 2y + 12 = 0$ at the point (6, 2).

8) Write the General Form of the equation of the circle with center at (0, 0) if a tangent line to the circle is given by: $x - y = 10$.