Circles
Section 1.9

Objectives
– Write standard form of a circle’s equation.
– Give center & radius of a circle whose equation is in standard form.
– Convert general form of a circle’s equation to standard form.

How do you find the distance between the center of a circle and a point on the circle?

\[
\text{Distance between the points} = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}
\]

Standard form or a circle with radius=r and center at (h,k)

\[
(x-h)^2 + (y-k)^2 = r^2
\]

Examples
• A circle centered at (-2,5) with a radius = 7 has what equation?

• A circle whose equation is \((x-2)^2 + (y+6)^2 = 4\) has what as its center and radius?

What if the equation is not in standard form?
You may have to complete the square.
Find the center and radius of \(x^2 + y^2 - 8x - 6y = 11\)