MAT 171 - CLASS NOTES - Section 2.8: Circles

1) A **circle** is the set of all points in a plane equidistant from a fixed point. The fixed distance is called the **radius**, and the fixed point is called the **center**.

2) The **standard equation** of a circle with radius **r** and center (h, k) is:

$$(x-h)^2 + (y-k)^2 = r^2 \text{ where r ¿ 0}$$

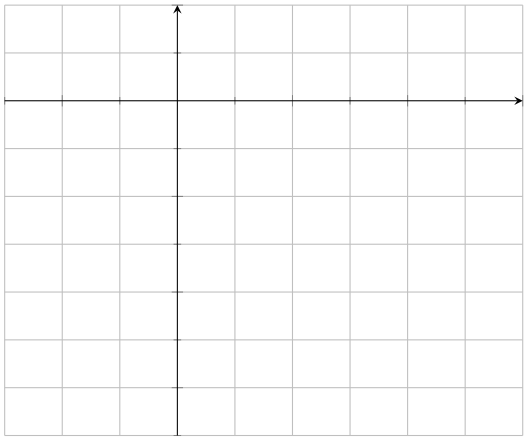
3) Write the equation if:

a) center at $(0, 0)$ and $r = 3$

b) center at $(4, -1)$ and $r = \sqrt[2]{6}$

4) State the center and the radius, then graph.

a) $(x-2)^2 + (y+3)^2 = 10$



5) $x^2 + y^2 - 14x + 8y + 56 = 0$