Name_____ Date_____

12.7 NOTES - **Equation of a Circle**

Complete the square. Then factor. Do not solve.
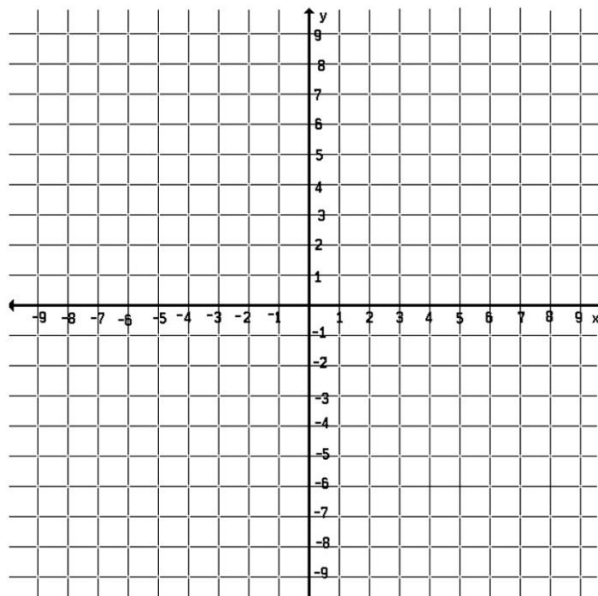
1) $x^2 + 6x + 1 = 0$

2) $x^2 + y^2 - 4x - 12y - 9 = 0$

3) What is the distance formula that is used to find the distance between two points on a coordinate plane?

4) What is the theorem that this formula is derived from? Explain.

5) If (h,k) is the center of a circle, what would be the equation of a circle with radius r?

6) Graph the circle given the following equation:
$(x-2)^2 + (y+1)^2 = 16$

7) Graph the circle by completing the square for the following equation: $x^2 + y^2 - 4x + 10y + 20 = 0$