GSE Geometry Unit 5

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| **LO5.7 I can complete the square to find the center and radius of a circle given by an equation.** |
| Key Points:  Standard form of the equation of a Circle:  If is the center of a circle, it is used as .  For example, a circle with a center at with a radius of 5 would be written as:    General form of a circle equation: , where D,E,F are constants |
| **Examples: Write the equation of the circle in standard form.**  1. Center: (5, 9)  Radius: 6    Now, let’s convert this to general form (\*hint: multiply everything out)  **Convert the equation for the circle from general to standard form (completing the square).**  2.  3. |

Work Time:

**Write the equation of the circle in standard form.**

1) Center: 2) Center:

Radius: 7 Radius: 6

**Convert each equation from #1-2 into general form.**

1. 2.

**Convert each equation to standard form.**

3. **4x2 + 4y2 + 5x + 8y – 2 = 0** 4. **5x2 + 5y2 - 15x + 10y – 1 = 0**