I. Determine the center and radius and then graph. Then rewrite the circle in the requested form.

1. \((x-1)^2 + (y+2)^2 = 9\)
   
   Center: (______,______) and \(r = \) ________

   Parametric Form of the Circle:
   
   \(x = \) __________ and \(y = \) ________________

2. \(x^2 + y^2 + 8x - 6y = -9\)
   
   Center: (______,______) and \(r = \) ________

   Parametric Form of the Circle:
   
   \(x = \) __________ and \(y = \) ________________

3. \(2x^2 + 2y^2 - 16x - 20y + 74 = 0\)
   
   Center: (______,______) and \(r = \) ________

   Parametric Form of the Circle:
   
   \(x = \) __________ and \(y = \) ________________

4. \(x = 5\cos T + 3\)
   
   \(y = 5\sin T - 2\)

   Center: (______,______) and \(r = \) ________

   Standard Form of the Circle:
   
   ____________________________

II. Write the equation of the circle in the requested form.

5. Circle with center (2,5) and passing through (4,1) in standard form.
6. Circle with center \((-1,5)\) and passing through \((7,-1)\) in parametric form.

7. In standard form...

8. In parametric form...

9. Circle with center \((-2,1)\) and tangent to the \(y\)-axis in standard form

10. Circle with center \((-3,-2)\) and tangent to the \(x\)-axis in parametric form

11. Congruent to the circle \(x^2 + y^2 = 9\) and translated 3 units down and 4 units right in parametric form

12. Congruent to the circle \((x-2)^2 + (y+1)^2 = 4\) and translated 3 units up and 2 units left in standard form

III. Determine whether the graph of each of the following is a circle, a point circle, or no circle. Explain your answer.

13. \(2x^2 + 2y^2 = 5y - 4x - 2\)

14. \(x^2 + y^2 - 4x - 6y + 13 = 0\)

15. \(3x^2 + 3y^2 - 30x + 18y + 178 = 0\)