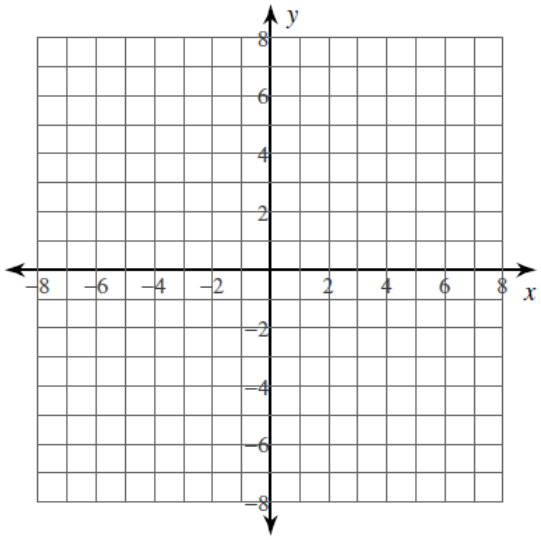
Geometry (G.C.5)
Unit Five: Equations of Circles (HW17)

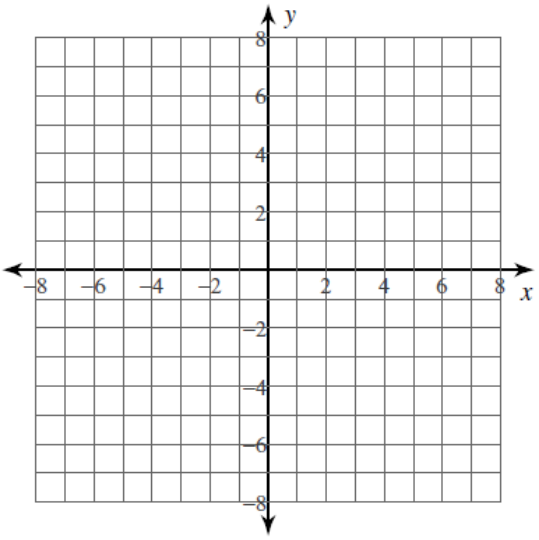
Name: _____
Date: _____ Period: _____

Graph the circle given by each equation below.

1) $(x-1)^2+(y+4)^2=9$

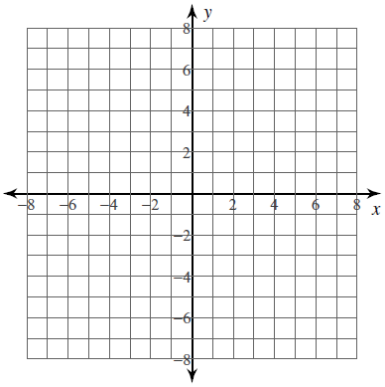


2) $x^2+(y-3)^2=14$

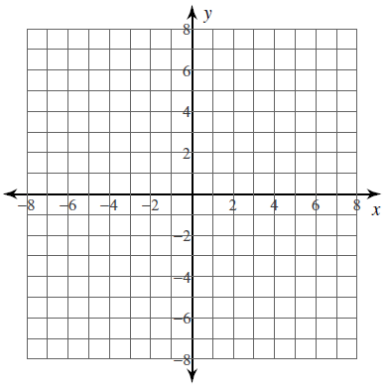


Use the information provided to write the equation of a circle that fits the criteria given. Use a graph to help you if necessary.

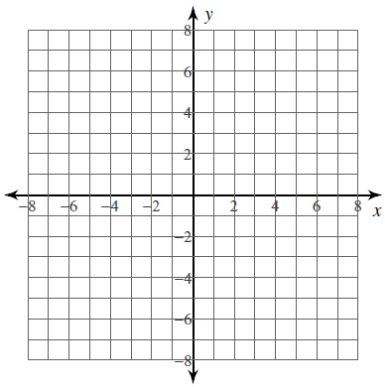
3) Center: (13, -13) Radius = 3



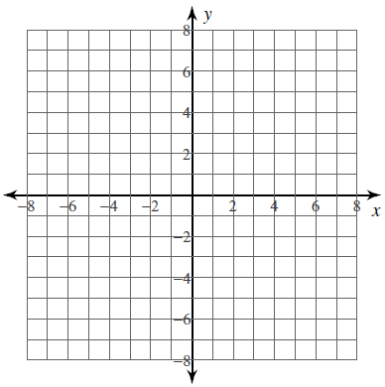
4) Center: (3, -2) Point on the Circle: (7, -2)



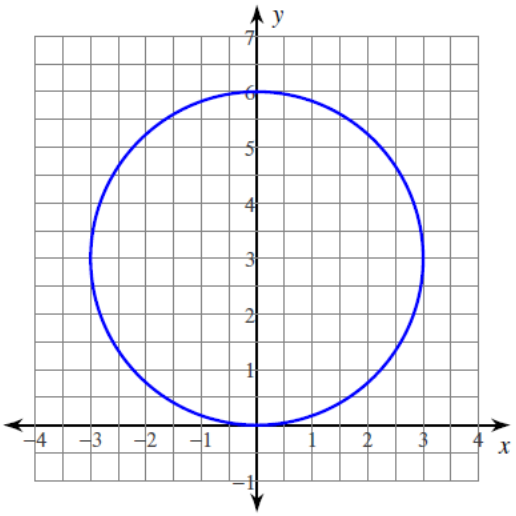
5) Center: (5, -3) Tangent to y = 4



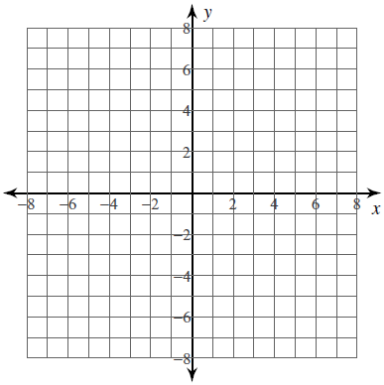
6) Center: (0, 3) Point on the Circle: (6, 4)



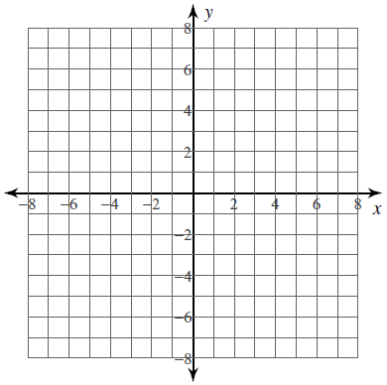
7) Write the equation of each graphed circle or the circle in the description.



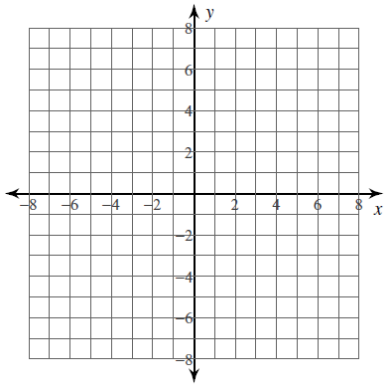
8) Translate the circle $(x-2)^2+(y+4)^2=1$ up 3 and left 6.



9) Dilate the circle $(x-1)^2+y^2=9$ by a factor of 3.



10) A circle with center (-1, 5) and an area of 25π.



Use what you know about the equation of a circle to answer the following questions.

11) A landscape architect wants to position a tree 5 meters west and 12 meters north of a stone marker in a garden. When the tree is fullgrown, its branches will be roughly circular with a diameter of 6 meters. Write an equation representing the outside of the grown trees branches relative to the stone.