

Name: _____
PCH: Circle Practice

Date: _____
Ms. Loughran

1. Find the center and radius of the circle $(x + 2)^2 + (y - 3)^2 = 10$.
2. Write an equation of the circle with a center at $(4,0)$ and a radius of 3.
3. Write an equation of the circle whose diameter has endpoints $(0,0)$ and $(6,8)$.
4. Find the center and radius of a circle $x^2 + y^2 + 4x - 6y - 12 = 0$.
5. Write an equation of the line tangent to the circle $x^2 + y^2 = 80$ at the point in the 1st quadrant where $x = 4$.
6. Write an equation of the line(s) tangent to the circle $x^2 + y^2 - 8x + 12y + 42 = 0$ at the points where $x = 5$.
7. Write an equation of the tangent line to the circle $2x^2 + 4x + 2y^2 + 8y - 3 = 0$ at the point $\left(-\frac{1}{2}, \frac{1}{2}\right)$.
8. Write the equations of the tangents to the circle $x^2 + y^2 = 4$ whose slopes are undefined.