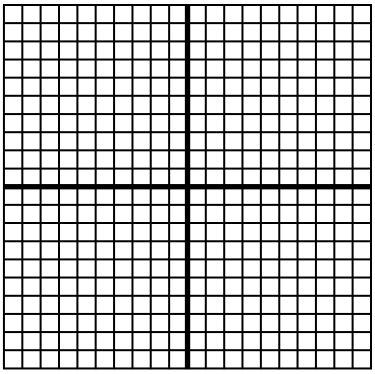
**5.1 Practice – Circles**

Name _____ Date _____ Period _____

Graph the following equations and state the domain and range:

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



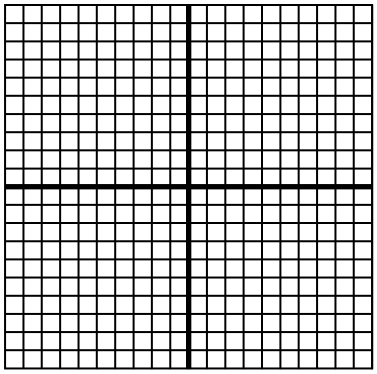
Center:

Radius:

Domain:

Range:

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



Center:

Radius:

Domain:

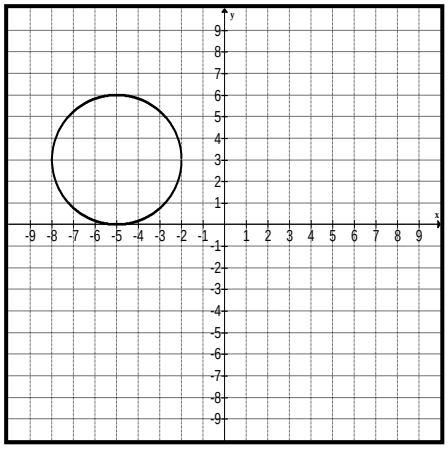
Range:

**#3-6.** Write the equation of the circles.

3. Center (-4, -5), Radius = $\sqrt{13}$

4. Center $\left(\frac{2}{3}, \frac{5}{8}\right)$ and an area of $49\pi$.

5.



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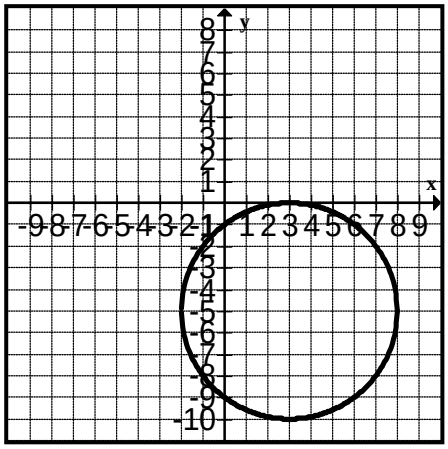
6.



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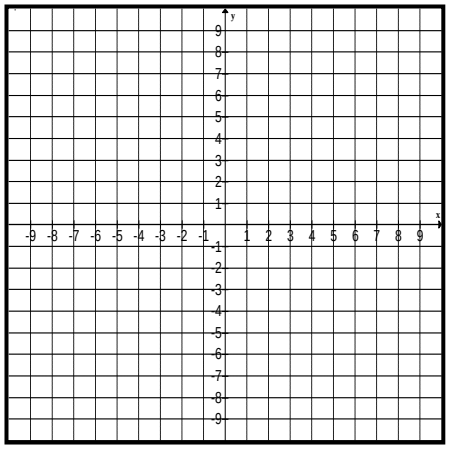
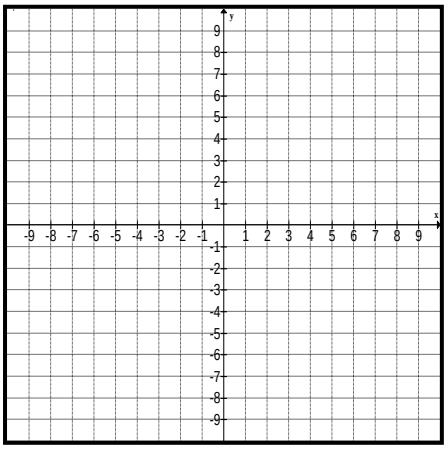
7. Both of the equations below represent a circle, in general form. Complete the squares to find the standard form equation and graph each circle.

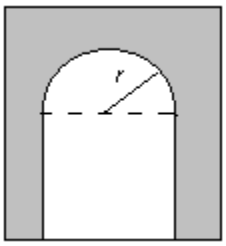
   A. $x^2 + y^2 + 6x + 4y + 12 = 0$

   B. $4x^2 + 4y^2 - 24x + 32y + 72 = 0$





8. The face of a one lane tunnel in the figure is a square with a semi-circle above it. The semi-circle can be described by the equation $x^2 + y^2 = 81$. A truck 15 feet wide and 22 feet tall tries to drive through the tunnel. Will it make it? Justify your answer!




9. The intersection of a right circular cone and a plane neither perpendicular nor parallel to its axis, nor though the base is a(n) _____.

10. Slicing a cone _____ gives a cross section of an ellipse.

    A. Parallel to its base
    B. Parallel to its side
    C. Perpendicular to its base
    D. None of the above