Circles – Coordinate Circle Problems 12.20

1. Determine the center and the radius of each circle.

   a. $(x - 2)^2 + (y - 5)^2 = 8^2$

   b. $(x - 4)^2 + y^2 = 81$

   c. $(x + 7)^2 + (y + 3)^2 = 36$

   d. $x^2 + (y - 1)^2 = 16$

   e. $(x - 5)^2 + (y + 6)^2 = 45$

2. Write the equation of the circle that has the given center and radius.

   a. center (3, 7); radius 4

   b. center (-4, 0); radius 7

   c. center (-5, 2); radius $\sqrt{23}$

   d. center (0, -6); radius m

3. Write the equation of the circle described. Use grid as needed.

   a. The circle has center (4, 4) and is tangent to both axes.

   b. The circle has center (5, 2) and is tangent to the x-axis.

   c. The circle has center (0, 6) and passes through the point (6, 14).

   d. The circle has center at the origin and passes through the point (7, 3).

   e. The circle has a diameter with endpoints (-2, 3) and (6, 3).

   f. The circle has a diameter with endpoints (3, -8) and (-7, 6).