Intermediate Algebra	Name: _____
Study Guide 21	Class: _____
Due Date: _____	Score: _____

<div align="center">

No Work ⇔ No Points

Use Pencil Only ⇔ Be Neat & Organized

</div>

1. **Consider** $(x+2)^2 + (y-3)^2 = 4$,

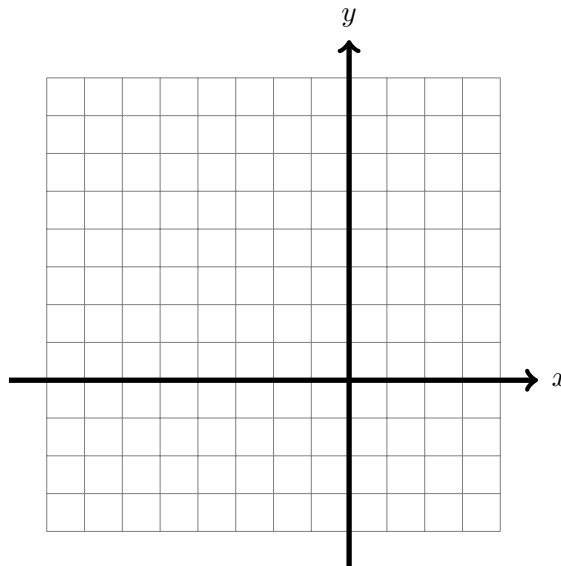   (a) **(2 points) Find its center.**

                                                        (a) _____

    (b) **(2 points) Find its radius.**

                                                        (b) _____

    (c) **(4 points) Graph. Discuss its domain and range in interval notation.**

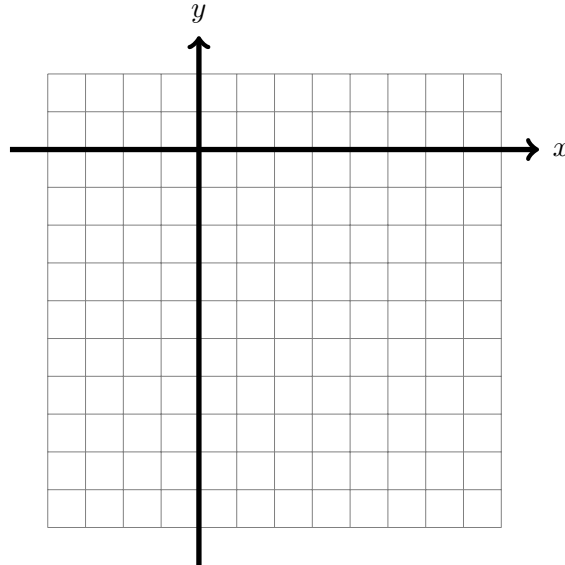

2. **Consider** $x^2 - 2x + 1 + y^2 + 6y + 9 = 16$,

    (a) **(4 points) Write in** $(x-h)^2 + (y-k)^2 = r^2$ **form.**

                                                        (a) _____
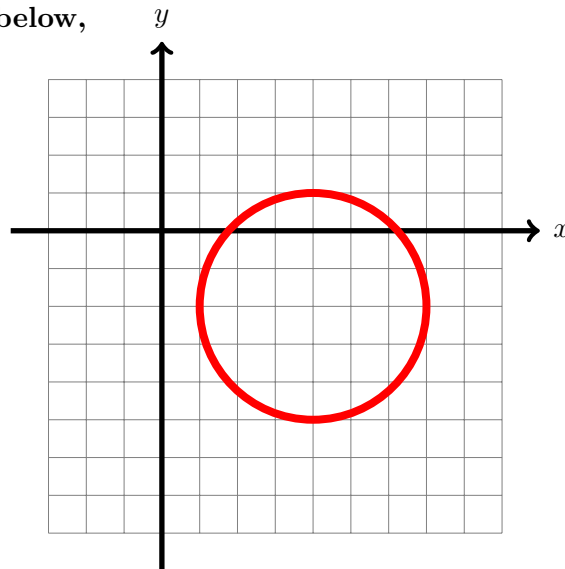
(b) (4 points) Find its center and radius.

(b) _____

(c) (4 points) Graph. Discuss its domain and range in interval notation.

3. Consider the graph below,

(a) (4 points) Find its center and radius.

(a) _____

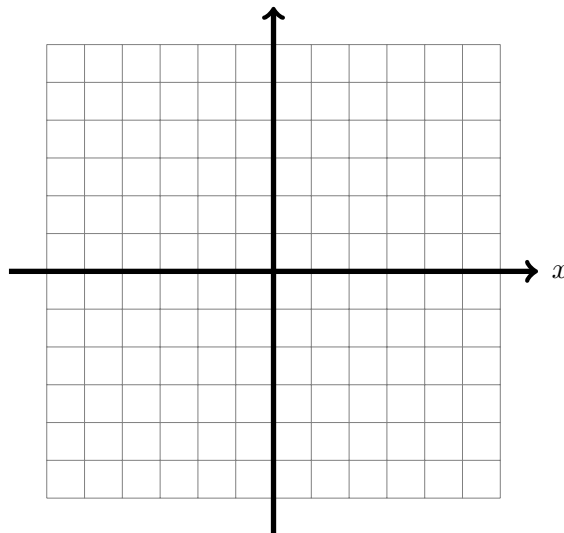**(b) (3 points) Find its equation in $(x - h)^2 + (y - k)^2 = r^2$ form.**

(b) _____

4. **Consider** $16x^2 + 4y^2 = 64,$

   (a) (2 points) Find its center.

                                    (a) _____

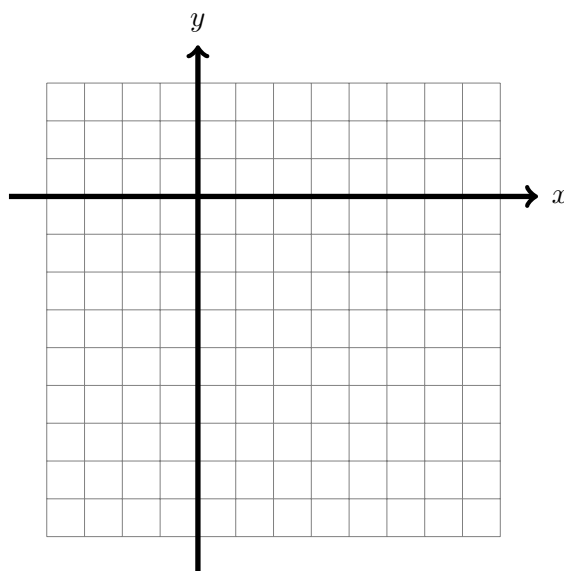   **(b) (4 points) Graph. Discuss its domain and range in interval notation.**

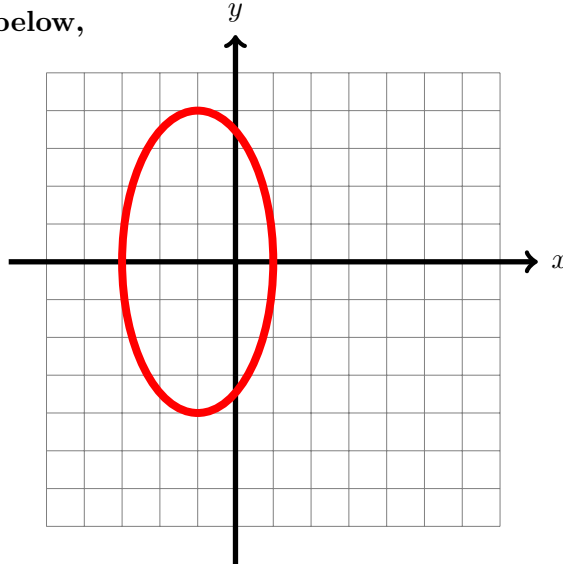5. **Consider** $\dfrac{(x-2)^2}{4} + \dfrac{(y+3)^2}{9} = 1,$

   (a) (2 points) Find its center.

                                      (a) _____

   (b) (4 points) Graph. Discuss its domain and range in interval notation.

6. Consider the graph below,

   (a) **(2 points)** Find its center.

                                                (a) _____

   (b) **(3 points)** Find its equation in $\dfrac{(x-h)^2}{a^2} + \dfrac{(y-k)^2}{b^2} = 1$ **form.**

                                                (b) _____

7. Consider $4(x+2)^2 + 9(y-3)^2 = 36$,

   (a) **(2 points)** Write in $\dfrac{(x-h)^2}{a^2} + \dfrac{(y-k)^2}{b^2} = 1$ **form.**

                                                (a) _____

   (b) **(4 points)** Graph.