

College Algebra

Name: _____

Study Guide 19

Class: _____

Due Date: _____

Score: _____

No Work \Leftrightarrow No Points

Use Pencil Only \Leftrightarrow Be Neat & Organized

1. Consider $f(x) = \frac{x - 6}{x + 2}$,

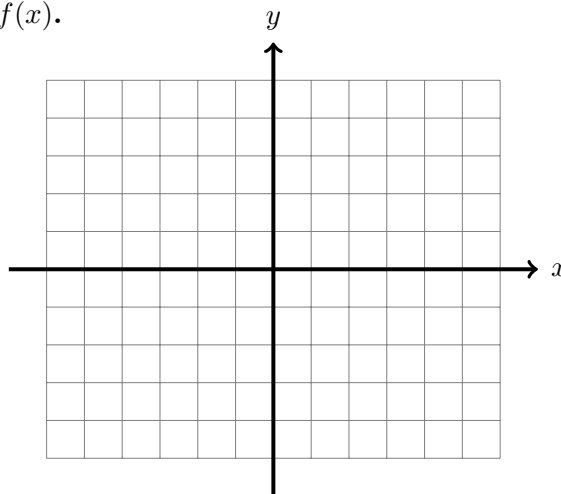
(a) (2 points) Find all its intercepts.

(a) _____

(b) (2 points) Find all its asymptotes .

(b) _____

(c) (2 points) Graph $f(x)$.



(d) (2 points) Find intervals where $f(x) \leq 0$.

(d) _____

2. Consider $\frac{x^2}{9} + \frac{y^2}{25} = 1$,

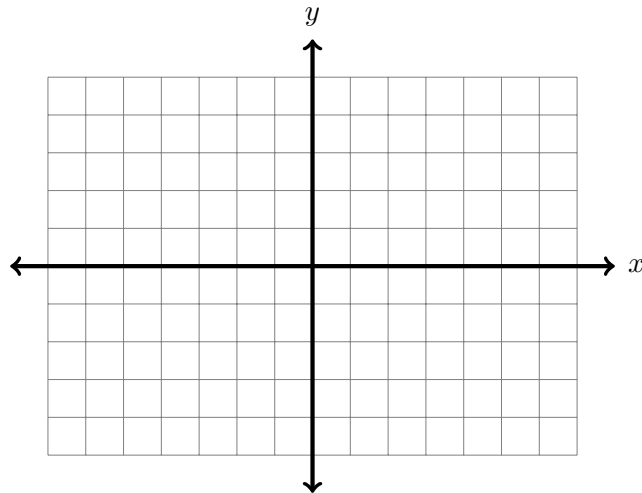
(a) (4 points) Find all its intercepts.

(a) _____

(b) (3 points) Find its foci.

(b) _____

(c) (3 points) Graph. Clearly mark all relevant information.



3. Consider an ellipse with major axis length of 8, minor axis length of 6, and foci on the x -axis.

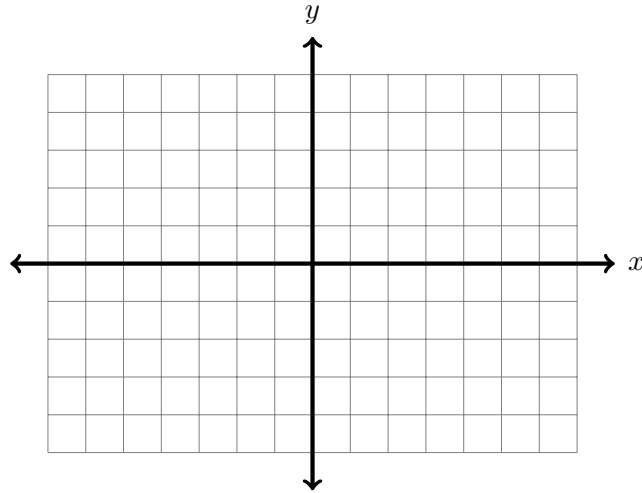
(a) (4 points) Find its equation.

(a) _____

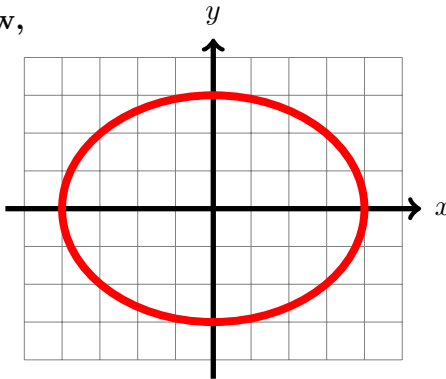
(b) (3 points) Find its foci.

(b) _____

(c) (3 points) Graph. Clearly mark all relevant information.



4. Consider the graph below,



(a) (2 points) Express its domain and range in interval notation.

(a) _____

(b) (2 points) Find the length of both major and minor axes.

(b) _____

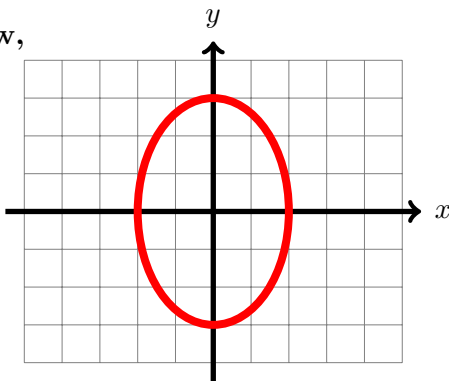
(c) (2 points) Find its foci.

(c) _____

(d) (2 points) Find its equation in $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ form.

(d) _____

5. Consider the graph below,



(a) (2 points) Express its domain and range in interval notation.

(a) _____

(b) (2 points) Find the length of both major and minor axes.

(b) _____

(c) (2 points) Find its foci.

(c) _____

(d) (2 points) Find its equation in $\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$ form.

(d) _____

6. (3 points) Find the equation of an ellipse with vertices at $(\pm 7, 0)$, and foci at $(\pm 5, 0)$.

6. _____

7. (3 points) Find the equation of an ellipse with vertices at $(0, \pm 4)$, and foci at $(0, \pm 2)$.

7. _____