

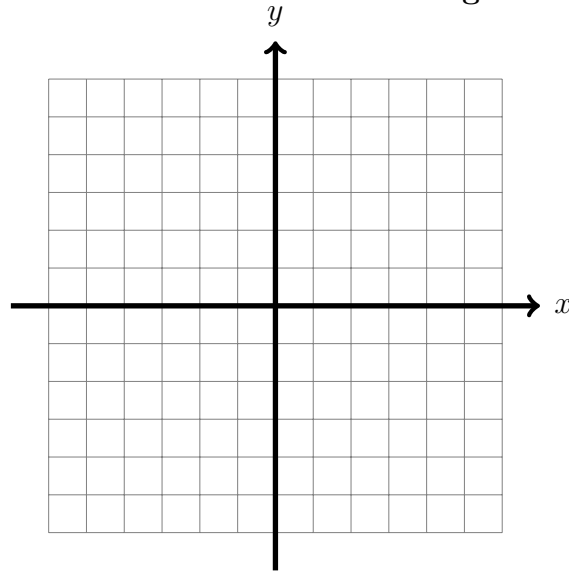
No Work  $\Leftrightarrow$  No Points

Use Pencil Only  $\Leftrightarrow$  Be Neat & Organized

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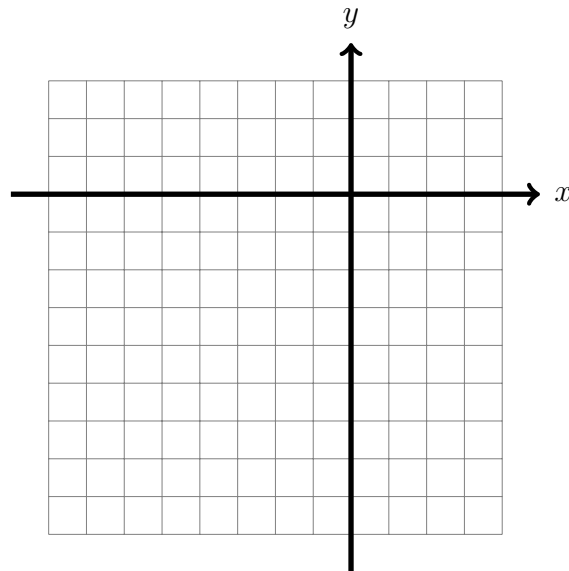
1. Consider  $x + 3 = (y - 2)^2$ ,

(a) (6 points) Graph. Discuss its domain and range in interval notation.



2. Consider  $(x + 2)^2 = -8(y + 3)$ ,

(a) (6 points) Graph. Clearly draw its directrix and mark the focus.

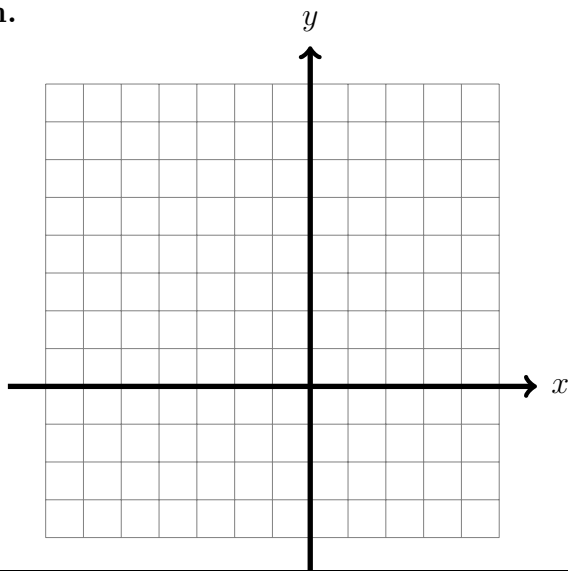


3. Consider  $4x^2 + 25y^2 + 8x - 250y + 529 = 0$ ,

(a) (7 points) Write in  $\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$  form.

(a) \_\_\_\_\_

(b) (6 points) Graph.

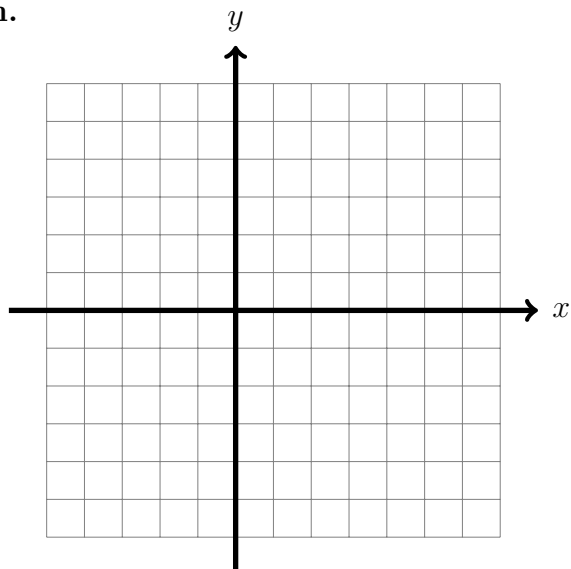


4. Consider  $-4x^2 + 4y^2 + 8x + 8y = 16$ ,

(a) (8 points) Write in  $\frac{(y-k)^2}{a^2} + \frac{(x-h)^2}{b^2} = 1$  form.

(a) \_\_\_\_\_

(b) (5 points) Graph.



5. Identify the type of graph,

(a) (6 points)  $x^2 + y^2 + 18x - 6y + 90 = 0$

(b) (6 points)  $x^2 + y^2 + 4x - 6y + 30 = 0$

(a) \_\_\_\_\_

(b) \_\_\_\_\_