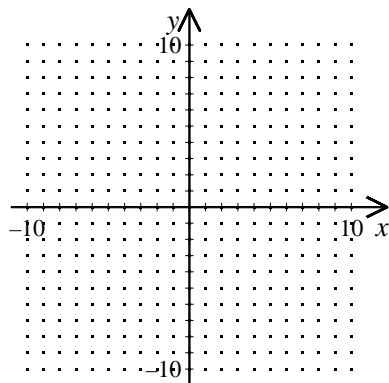


NAME: _____

1. Simplify the equation and graph:

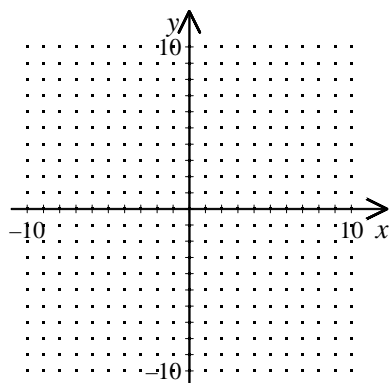
$$-9x^2 + y^2 + 54x + 2y - 116 = 0$$



[1] _____

2. Simplify the equation and graph:

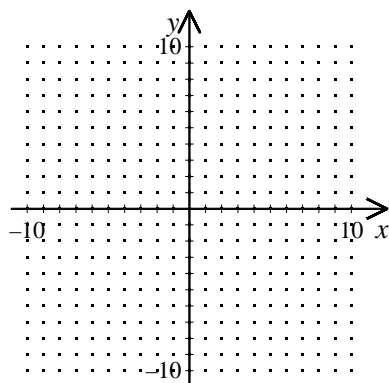
$$-4x^2 + y^2 + 24x + 4y - 48 = 0$$



[2] _____

3. Simplify the equation and graph:

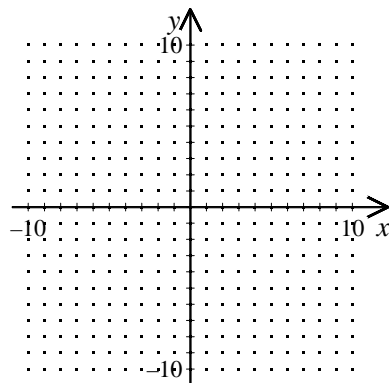
$$-x^2 + 4y^2 - 2x + 24y + 19 = 0$$



[3] _____

4. Simplify the equation and graph:

$$-4x^2 + 9y^2 + 24x + 18y - 171 = 0$$

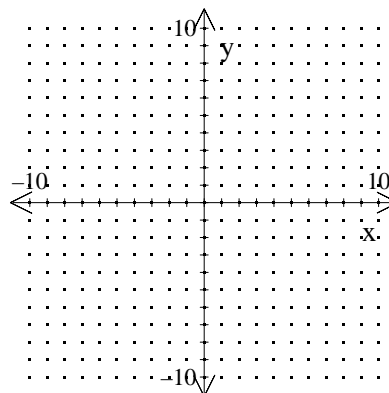


[4] _____

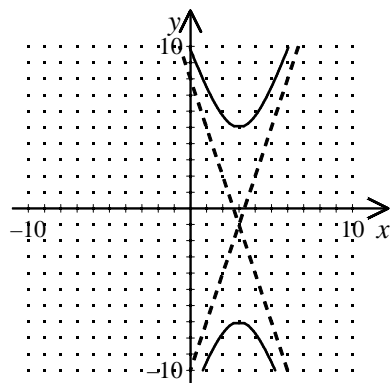
5. The table shows some data that can be modeled by a hyperbola.

x	2	4	8	4	8
y	0	1.7	3.9	-1.7	-3.9

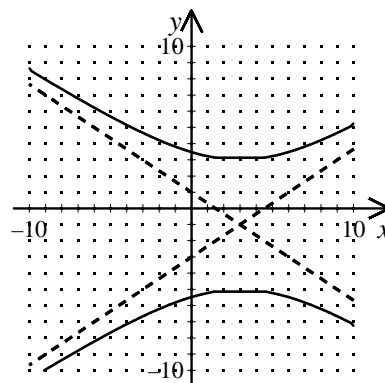
Plot these points on a coordinate grid. Sketch the rest of the hyperbola.



[5] _____



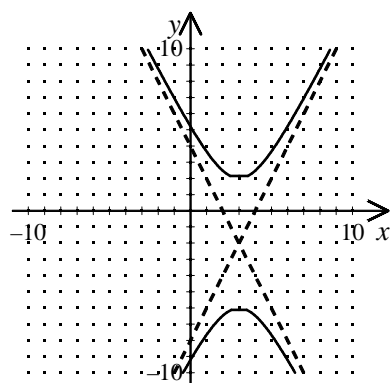
[1]
$$\frac{(y+1)^2}{36} - \frac{(x-3)^2}{4} = 1$$



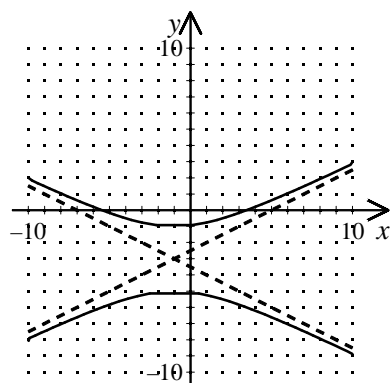
[4]
$$\frac{(y+1)^2}{16} - \frac{(x-3)^2}{36} = 1$$

Check student's graphs. Should look like

[5]
$$\frac{x^2}{4} - y^2 = 1.$$



[2]
$$\frac{(y+2)^2}{16} - \frac{(x-3)^2}{4} = 1$$



[3]
$$\frac{(y+3)^2}{4} - \frac{(x+1)^2}{16} = 1$$