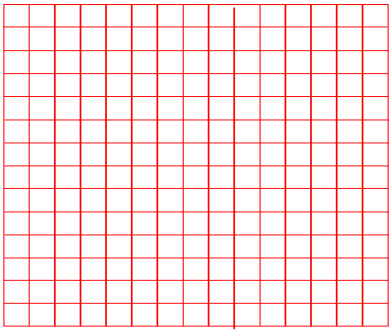
Math 041 Assignment 1.2 **Last Name:_____1st_____**

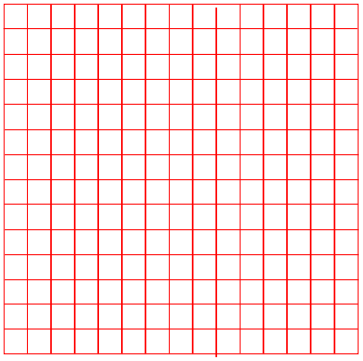
Instructions: Write complete legible solutions to the following problems in the space provided. Be sure to supply all the necessary steps that lead to your answers.

1. Find the x-intercepts and y-intercept of the graph of the equation, the sketch the graphs and be sure to utilize the whole grid and provide all the labels.

a. $(x-1)^2 + y^2 = 4$

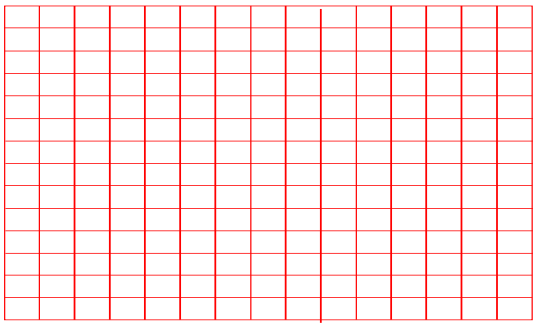


b. $y = |x+2| - 3$



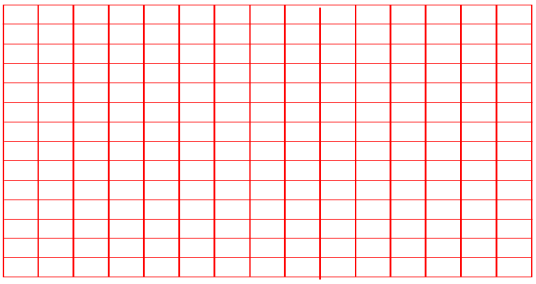
a. Prove that the graph of the equation is symmetric about the y axis then sketch the graph and be sure to utilize the whole grid and provide all the labels.

$$y = \frac{1}{x^2+4}$$

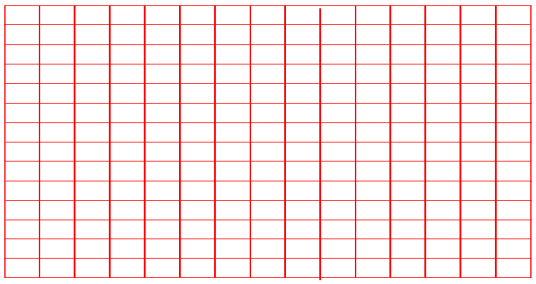


2. Prove that the given equations are symmetric about the x axis and be sure to utilize the whole grid and provide all the labels.

a. $|y| = x - 1$



b. $x - 2 = y^2$



3. Prove that the given equation is symmetric about the origin, then find all intercepts and sketch the graph of the equation. Be sure to utilize the whole grid and provide all the labels.

$$y = \frac{x}{x^2 + 1}$$