

Math 122A
Create a Function

Name _____

1. Write an equation for each of the following:

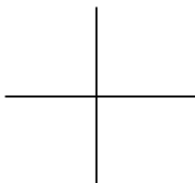
- a) A relation that is not a function. _____
- b) An odd function. _____
- c) A trig identity. _____
- d) A rational function with two vertical asymptotes. _____
- e) A linear function that is perpendicular to $2x + 5y = 1$. _____
- f) An exponential decay function that does not have base e . _____
- g) V is proportional to the cube of t . _____
- h) A sine curve with amplitude 5 and period 3. _____
- i) The inverse function of $f(x) = e^x$. _____
- j) A logarithmic function with domain $x > 5$. _____
- k) A polynomial with zeros $x = -2, 3, 7$. _____
- l) The bottom half of a circle with center $(0,0)$ and radius 7. _____

2. Determine if the following statements are true or false.

- a) _____ A graph of a function can cross its horizontal asymptote.
- b) _____ Average rate of change can be viewed as the slope between two points.
- c) _____ When we solve $f(x) = 0$, we are looking for vertical intercepts.

3. Sketch each of the following: (you do not need to give an equation)

a) A function with domain all real numbers except $x = 3$ and range $(-\infty, 0]$.



b) A function that is not one-to-one.

