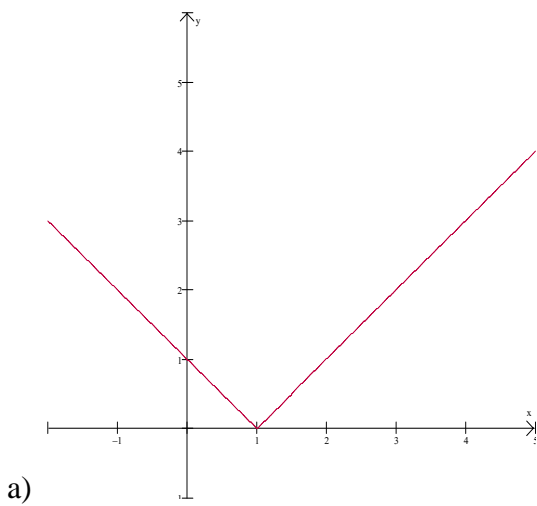


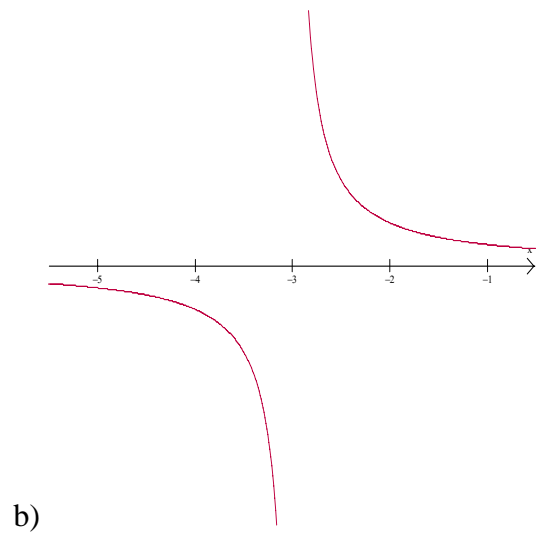
Math 113
Quiz #3

1) Find the $f'(x)$ by the limit process where $f(x) = \frac{1}{x-1}$

2) Describe the x -values for which $f(x)$ is differentiable:



$$f(x) = |x-1|$$



$$f(x) = \frac{1}{x+3}$$

3) Using the basic differentiation rules find the derivative of each function:

a) $f(x) = \sqrt[5]{x}$

b) $g(t) = t^3 + 2e^t$

c) $g(t) = \pi \cos(t)$

4) Using the basic differentiation rules find the slope of the graph of the function at the indicated point.

a) $f(\theta) = 4 \sin(\theta) - \theta$ at the point (0,0)

b) $f(x) = \frac{3}{x^2}$ at the point (1,3)