

July 9, 2003

Show all work for credit.

Leave all answers as exact answers unless otherwise stated.

1. Simplify  $\frac{f(x+h) - f(x)}{h}$  given  $f(x) = 1/x$

2. Find the equation to the line that passes through the points (6, 19) and (2, 7)

3. Given:

$$\gamma(.1) = 8$$

$$\gamma(.2) = 9$$

$$\gamma(.3) = 8.7$$

$$\gamma(.4) = 4.6$$

(a) Find the best estimation of  $\gamma(.367)$

(b) Solve for  $x$ :  $\gamma(x) = 4.7$