

**MA 15200, Answers Exam 3, Fall 2008**

1)  $k = \frac{3}{2}$

2)  $f(x+2) = \frac{2x+4}{x+1}$

3)  $\left(\frac{f}{g}\right)(1)$  has no real value.

4) Domain:  $[-5, 5]$ , Range:  $[-3, 22]$

5)  $f^{-1}(x) = \frac{x-5}{3}$

6) The graph of  $y = 3^x$  has an  $x$ -intercept at  $(3, 0)$ .

7)  $f(x) = \begin{cases} -x+2 & \text{if } x < 1 \\ x^2+2 & \text{if } x \geq 1 \end{cases}$

8) The deposit was between \$440 and \$470. (\$453.31)

9)  $9^{rs} = x^2 + 8$

10) Between 2 and 3.8 (3.73)

11)  $\frac{2+x}{x}$

12)  $-9$

13)  $2\log_2 x + 2\log_2 y + \frac{1}{2}\log_2 z$

14) 0.8394

15)  $x = \frac{5}{4}$