MATH 122 Spring, 2012 Quiz #1 Name: Mr²

(6)

1. You are given that L is a linear function of t. Find the slope m, the L-intercept b, and write the slope intercept equation of the line. Also fill in the remaining spaces in the table.

L	-45		51		147		179
t	-1	3	2	3	5	1	6

(96) (96) (1) (32)

2 $m = \frac{\Delta L}{\Delta t} = \frac{51-(-45)}{2-(-1)} = \frac{96}{3} = 32$ 1

1 $L = 32t + b$ $L = 32(5) - 13$

$51 = 32(2) + b$ $= 147$

2 $b = -13 \rightarrow$ so $L = 32t - 13$ (no "x" and "y" stuff)

2. Here are some values for two functions: $f(x)$ and $g(u)$. Caution! Be sure you recognize which is the independent variable and which the dependent variable.

x	0	1	3	4
$f(x)$	1	4	10	13

u	7	10	13	19
$g(u)$	27	30	32	36

(4)

a. Explain why $f(x)$ could or could not be a linear function of x, and why $g(u)$ could or could not be a linear function of u.

1½ slopes for f: $\frac{4-1}{1-0} = 3$, $\frac{10-4}{3-1} = 3$, $\frac{13-10}{4-3} = 3$

all the same, f could be linear

1½ slopes for g: $\frac{30-27}{10-7} = 1$, $\frac{32-30}{13-10} = \frac{2}{3} \neq 1$

slopes differ - can not be linear

b. Compute $g(13) - f(4) = 32 - 13$.

1 $= 19$