

Math 157 - Quiz 4

September 23, 2015

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) The table belows gives the values of the function f at selected points. Use the data in the table to find a reasonable approximation for the instantaneous rate of change of f at $x = 1$.

x	0.8	0.9	1.0	1.1	1.2
$f(x)$	0.974	0.946	0.909	0.863	0.808

2. (6 points) Let $f(x) = \frac{x}{x-1}$. By computing rates of change over smaller and smaller intervals, estimate the instantaneous rate of change of f at $x = 3$. (You must consider at least 4 intervals to receive full credit.)