Quiz 7.3 – Graph Analysis with the TI-84

1. (1 pt) alfredLibrary/AUCI/chapter7/lesson3/quiz/values1pet.pg

Consider the function f defined by

$$f(x) = \frac{x^2 + 3}{x - 5}$$

Graph f on your graphing calculator for x in the interval $[0,5]$ (note the asymptote at $x = 5$). Use the options in the "calculate" menu to find the following function values. Round your answers to at least four decimal places.

$f(0.75) = $ _____

$f(3.63) = $ _____

$f(0.39) = $ _____

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2. (1 pt) alfredLibrary/AUCI/chapter7/lesson3/quiz/zeros1pet.pg

Use your graphing calculator and the options in the "calculate" menu to approximate the solutions to the equation.

$$x^3 + 0.9x^2 + 0.9x - 0.1 = 0.$$

In other words, find the x-intercepts of the function

$$y = x^3 + 0.9x^2 + 0.9x - 0.1.$$

If there is more than one solution, then enter them as a comma-separated list.

$x = $ _____

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3. (1 pt) alfredLibrary/AUCI/chapter7/lesson3/quiz/derivative1pet.pg

Suppose

$$f(x) = \frac{x^8(x-2)^7}{(x^2+1)^3}$$

Use your graphing calculator and the options in the "calculate" menu to find the derivative of f at $x = 1$.

$f'(1) = $ _____