MATH 114 QUIZ 4
11 OCTOBER 2016

Solve the following two problems. Show all steps in your work.

(1) Consider the quadratic function g given by

$$g(x) = 6x - 5 - 2x^2$$

for all real numbers x. Complete the square to find the axis of symmetry and the vertex of the function. Does g have a minimum value? If so, find it. Does g have a maximum value? If so, find it.

(2) Suppose h is a linear function with x-intercept $(3/7, 0)$ and y-intercept $(0, 3)$. Give a sequence of transformations (shifting, compressing, stretching, and/or reflections) that transforms the line $y = x$ into the line $y = h(x)$.