King Fahd University of Petroleum & Minerals
Department of Mathematical Sciences
Math 101-25(Dr. Rajai), Quiz # 8, Semester 161

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Name: Student ID#: SR:

Q1) A rectangle has its base on the x-axis and its upper two vertices on the parabola $y = 3 - 4x^2$. What is the largest area of the rectangle can have, and what are its dimensions?

The largest area is ____

The dimensions are ____, ____

Q2) Let $x_1 = 0$ be the initial approximation of the x −coordinate of the point of intersection of the graphs of $y = \sin\left(x + \frac{\pi}{2}\right)$ and $y = \ln(3x + 1)$. Find the second approximation x_2 given by Newton's method.

$x_2 =$