Name: _____
Student ID: _____

Quiz 4

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. *(5 marks)* §5.4 #13 Use the Second Fundamental Theorem of Calculus to find the derivative of the function.

$$g(x) = \int_{2x}^{3x} \frac{u^2-1}{u^2+1}\, du$$

Question 2. *(5 marks)* §5.4 #18 Find the average value of

$$f(\theta) = \sec\theta \tan\theta$$

on the interval $\left[0, \frac{\pi}{4}\right]$