Name: _____

Student ID: _____

# Quiz 3

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.** *(2 marks)* §5.2 #32 Evaluate the integral by interpreting it in terms of areas.

$$\int_{-2}^{2} \sqrt{4 - x^2}\, dx$$

**Question 2.** *(2 marks)* §5.2 #37 Given that $\int_{4}^{9} \sqrt{x}\, dx = \frac{38}{3}$, what is $\int_{9}^{4} \sqrt{t}\, dt$?

**Question 3.** *(2 marks)* §5.3 #29 What is wrong with the equation?

$$\int_{-1}^{3} \frac{1}{x^2}\, dx = \left[ \frac{x^{-1}}{-1} \right]_{-1}^{3} = -\frac{4}{3}$$

**Question 4.** *(4 marks)* §5.3 #14 Evaluate the integral.

$$\int_{1}^{9} \frac{3x - 2}{\sqrt{x}}\, dx$$