

Name: \_\_\_\_\_  
Student ID: \_\_\_\_\_

## Quiz 9

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) §7.2 #17 The region enclosed by the given curves is rotated about the specified line. Find the volume of the resulting solid.

$$y = x^3, y = \sqrt{x}; \text{ about } x = 1$$

**Question 2.** (5 marks) §7.3 #24 Set up an integral for the volume of the solid obtained by rotating the region bounded by the given curves about the specified axis.

$$y = x, y = 2x/(1 + x^3); \text{ about } x = -1$$

**Question 3.** (5 marks) Evaluate the indefinite integral

$$\int \frac{x^3 + x^2 + 1}{x^3 + x^2 + 2x} dx$$