

Name: _____
Student ID: _____

Quiz 9

This quiz is graded out of 15 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. §7.1 #5 (5 marks) Sketch the region enclosed by the given curves. Then find the area of the region.

$$y = x + 1, \quad y = 9 - x^2, \quad x = -1, \quad x = 2$$

Question 2. §6.6 #32 (5 marks) Determine whether the integral is convergent or divergent. Evaluate if convergent.

$$\int_0^1 \frac{\ln x}{\sqrt{x}} dx$$

Question 3. §7.2 #9 (5 marks) Find the volume of the solid obtained by rotating the region bounded by the given curves about the specified line.

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