

Math 150A, Fall 2007, Section 11  
Quiz 8

**Name:**

Show your work. No work, no credit.

1. Use the geometric interpretation to find the values of the integrals

$$\int_0^5 (2x - 4) dx \quad \text{and} \quad \int_0^5 |2x - 4| dx.$$

2. Given that

$$\int_0^1 x \, dx = \frac{1}{2}, \quad \int_0^1 x^2 \, dx = \frac{1}{3}, \quad \int_0^1 x^3 \, dx = \frac{1}{4}, \quad \int_{-1}^0 (x+1)^3 \, dx = \frac{1}{4},$$

find the value of the integral

$$\int_{-1}^1 (x+1)^3 \, dx.$$

3. Express  $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{1}{n} \left(\frac{i}{n}\right)^2$  as a definite integral.

Pledged

Honor code: I have neither given nor received help on this quiz.