

Name: _____

Math 211 Quiz 12

Section: 302 303

May 2, 2012

1. Evaluate the given definite integral.

$$\text{a. } \int_4^9 (\sqrt{x} - 1) dx \quad \text{b. } \int_0^1 (e^x - e^{-x}) dx \quad \text{c. } \int_1^{e^2} \frac{(\ln x)^2}{x} dx$$

2. Find the average value of the given function over the the specified interval.

$$\text{a. } 1 - x^2, -3 \leq x \leq 3 \quad \text{b. } \frac{x + 1}{x^2 + 2 + 2}, -1 \leq x \leq 1$$

3. Sketch the region between the curve $y = x^2 - 2x$ and $y = -x^2 + 4$ and then find its area.