Math 220 (section AD9) **Quiz 11** **Spring 2011**

Name _____

- You have 15 minutes
- No calculators
- Show sufficient work

1. (2 points) Evaluate the following indefinite integral.

$$\int \frac{(2+\sqrt[5]{x})^7}{x^{4/5}}\,dx$$

2. (3 points) Evaluate and simplify the following definite integral.

$$\int_0^{\pi/8} \frac{\sin(2x)}{\cos^3(2x)}\,dx$$

3. (4 points) Consider the region from $y = 2$ to $y = 5$ between the y-axis and the graph of $y = \frac{1}{3}\ln x$. In the following manner set up, but do not evaluate, integrals which represent the area of this region.

   (a) Integrate with respect to x.

   (b) Integrate with respect to y. (the integrands in parts (a) and (b) should be different)

4. (1 point) Determine the area of the region in problem (3) by completing any necessary integration.