Instructions: This handout is extra credit. You must submit this handout at the beginning of class on Monday, April 9th, 2012.

Suggestion: This handout is meant as a refresher of the topics in Section 7.1. Whether a refresher is better at the beginning or the end of Spring Break is up to your discretion.

1. (1 point) In the definition of the Indefinite Integral (page 358), there is a constant c. Describe in your own words the meaning of this constant.

2. (2 point) Recall the definition of an antiderivative (page 356). How can we check that  $F(x) = \frac{5}{3}x^{9/5}$  is the antiderivative of  $f(x) = 3x^{4/5}$ ? Show this is true for the functions given.

3. (2 point) Why is the restriction  $n \neq 1$  on the power rule (page 358) for integrals necessary? What rule allows us to integrate  $x^{-1}$ ?