Date: 11/1/13.

Instructor: Cody Clifton.

Name: _____

This 10-point quiz will test your knowledge of simple antidifferentiation/integration techniques. Read carefully and always show your work. You have 15 minutes... good luck!

(1) Find $\int dx$.

Solution.
$$\int dx = x + C.$$

(2) Find $\int t^{4/5} dt$.

Solution.
$$\int t^{4/5} dt = \frac{t^{4/5+1}}{4/5+1} + C = \frac{5}{9} t^{9/5} + C.$$

(3) Evaluate $\int_{-1}^{1} e^x dx$.

Solution.
$$\int_{-1}^{1} e^x dx = e^x \big|_{-1}^{1} = e^1 - e^{-1} = e - \frac{1}{e} \approx 2.35.$$

(4) Evaluate $\int_{-1}^{1} e \, dx$.

Solution.
$$\int_{-1}^{1} e \, dx = 2e \approx 5.44.$$

(5) Evaluate $\int_{0}^{\pi/2} \cos y \, dy$.

Solution.
$$\int_{0}^{\pi/2} \cos y \, dy = \sin y \big|_{0}^{\pi/2} = \sin(\pi/2) - \sin(0) = 1.$$