Calculus II | Test #3 | April 15, 2005

Name_____ | R. Hammack | Score _____

(1) $\int \frac{x}{\sec(x^2)}\, dx =$

(2) $\int x \sec^2(x)\, dx =$

(3) $\int \sec(x)\, dx =$

(4) $\int \sin^{-1}(x)\, dx =$

(5) $\int \frac{1}{\sqrt{x}\, 3^{\sqrt{x}}}\, dx =$

(6) $\int \sin^3(x)\cos^3(x)\, dx =$

(7) $\int \frac{e^x}{\sqrt{9-e^{2x}}}\, dx =$

(8) $\int_0^2 \frac{1}{x^2+4}\, dx =$

(9) $\int \frac{x^3 + x^2 + 3x + 1}{(x^2 + 1)^2}\, dx =$

(10) $\int \frac{1}{\sqrt{x^2 - 1}}\, dx =$

(11) $\int_2^{\infty} e^{-2x}\, dx =$

(12) $\int_0^1 \frac{3}{\sqrt{x}}\, dx =$
(Note: The integral is improper)

(13) $\lim_{x \to 1} \frac{e^x - e}{x^2 - 1} =$

(14) $\lim_{x \to \infty} x e^{-x} =$