

Calculus II - Spring 2014

Quiz #1, February 12, 2014

In the following problems you are required to show all your work and provide the necessary explanations everywhere to get full credit.

1. Find $\int \left(x^3 + 3^x + \sin x + \sec^2 x + \frac{1}{\sqrt{x}} + \frac{1}{1+x^2} + \frac{1}{\sqrt{1-x^2}} \right) dx$.

2. Find $\int \frac{2x^4}{\sqrt{1-3x^5}} dx$.

3. Find $\int_0^{\pi/8} \sin^2 x dx$.

4. Find $\int \ln^2 x dx$.

5. Find $\int \frac{dx}{\sqrt{x^2 + 1}}$.