

Math 182 Honors Quiz 3 Version A

1. Solve the following definite and indefinite integrals:

(i) $\int_1^3 x^2 dx$

(ii) $\int \frac{1}{1+e^x} dx$

(iii) $\int \frac{x}{\sqrt[3]{x+1}} dx$

(iv) $\int \arctan \sqrt{x} dx$

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2. State Taylor's Theorem with the integral form of the remainder term.

3. Explain why $\lim_{n \rightarrow \infty} \frac{3^n}{n!} = 0$.