

Math 176 Quiz 10 Version A

1. Fill in the blanks for the following anti-derivative rules:

$$\int x^n dx = \boxed{} \quad \text{for } n \neq -1 \quad \int \frac{1}{x} dx = \boxed{}$$

$$\int e^x dx = \boxed{} \quad \int \ln x dx = \boxed{}$$

2. Find the anti-derivative $\int \left(e^{5x} + \frac{1}{x} \right) dx$

3. Find the definite integral $\int_1^2 \left(e^{5x} + \frac{1}{x} \right) dx$