

Honors Math 182 Quiz 3 Version A

1. Solve the following antiderivative problems:

(i) $\int e^x \sin e^x dx$

(ii) $\int x \sinh 2x dx$

(iii) $\int \frac{\ln x}{x} dx$

(iv) $\int \sqrt{\frac{x-1}{x^5}} dx$

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2. Find the following integrals:

(i) $\int_1^e \ln x \, dx$

(ii) $\int_0^{\pi/2} |1 - 2 \sin x| \, dx$

3. Find the following derivatives.

(i) $\frac{d}{dx} (5 + \ln |x + 2|)$

(ii) $\frac{d}{dx} \sin(2 \sinh x)$