

242 QUIZ 1 REDO (OPTIONAL)

Problem 1.1. For a fixed number, n , use the fundamental theorem of calculus (version 1) to find

$$\frac{d}{dx} \left(\int_1^{x^n} \frac{1}{t} dt \right) =$$

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Problem 1.2.

$$\frac{d}{dx} \left(\tan(\sec(x)) \right) =$$

Problem 1.3.

$$\int \cos^5(x) \, dx =$$

Problem 1.4.

$$\int \sec^2(x) \sin(\tan(x) + 3) \, dx =$$

Problem 1.5.

$$\frac{d}{dx} \left(\frac{\sin(x)}{x^2} \int_1^x \frac{1}{t} dt \right) =$$

Problem 1.6.

$$\frac{d}{dx} \left(\csc(x^2 \sin(x)) \right) =$$