

You may only use your textbook, your notes, and your calculator on these problems. You may not use any outside resources, including tutors or solution manuals. Remember that the purpose of these quizzes is to see if you understand what you have learned on your homework, and also to tell you what you still need to study for the upcoming exam.

1. (2 points) State the full Fundamental Theorem of Calculus.

2. (2 points) Evaluate the integral $\int_{-\sqrt{3}}^{\sqrt{3}} (x+1)(x^2+4) dx$.

3. (2 points) Find $\frac{dy}{dx}$ of $\int_1^x \frac{1}{t} dt$ for $x > 0$.

4. (2 points) Evaluate the integral $\int y\sqrt{7-3y^2} dy$.

5. (2 points) Evaluate the integral $\int \frac{\operatorname{csch}(\ln(x)) \operatorname{coth}(\ln(x))}{x} dx$.