

Calculus Quiz

Your Name:

1. Use Part I of the Fundamental Theorem of Calculus to find the derivative of the function.

$$g(x) = \int_1^{x^2} r^3 \sin r \, dr$$

(2-5) Evaluate the indefinite integral. Show all work.

2. $\int (5x + 1)^6 \, dx$

3. $\int 8x^3 \sqrt{x^4 - 7} \, dx$

4. $\int e^x \sin(e^x) \, dx$

5. $\int \frac{\tan^{-1} x}{2 + 2x^2} \, dx$

(6-7) Evaluate the definite integral. Show all work.

6. $\int_2^3 \frac{3x^2}{x^3 - 3} dx$



7. $\int_{16}^1 (17 - x)^{1/4} dx$

