

Integrals and Natural Logarithms #5

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Name _____

Instructions

Answers appear on the ANSWERS page. Solutions appear on the SOLUTIONS page.

1. Compute: $\int (2x^5 - 6x^3 + 4x + 8) dx =$

2. Compute: $\int (6 \sec^2(x) - 3 \csc^2(x)) dx =$

3. Compute: $\int_{x=-2}^{x=0} (3x^2 + 3x + 3) dx =$

4. Compute: $\int \frac{(4x^3+3)}{\sqrt{3x^4+9x}} dx =$

5. Compute: $\int \sec^2(2x^2 + 1) x dx =$

6. Compute: $\int \frac{\sec^2(x)}{\tan(x)} dx =$

7. Compute: $\frac{d}{dx} [\ln(\cot(x) + 3)] =$

8. Compute: $\frac{d}{dx} [\ln(2x^2 + 6x - 3)] =$

9. Compute: $\frac{d}{dx} [\ln(\sin(x) \sqrt{x^2 - 1})] =$

10. Compute: $\int_{x=0}^{x=2} \sqrt{x^3 + 1} x^2 dx$