

Integrals and Natural Logarithms #4

SPRING 2013

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Name _____

Instructions

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

1. Compute: $\int (15x^4 + 12x^3 + 8x + 3\sqrt{x} + 2) dx =$

2. Compute: $\int (4 \sin(x) + 3 \csc(x) \cot(x)) dx =$

3. Compute: $\int_{x=0}^{x=2} (6x^2 + 9x + 1) dx =$

4. Compute: $\int (5x^2 + 10x + 2)^{10} (x + 1) dx =$

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

6. Compute: $\int \frac{\cos(x)}{\sin(x)+5} dx =$

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

8. Compute: $\frac{d}{dx} [\ln(10x^3 - 8x^2 + 4x)] =$

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

10. Compute: $\int_{x=-1}^{x=1} (x^5 + 1)^3 x^4 dx =$