

Integration - Trigonometric Functions

Date _____ Period _____

Evaluate each indefinite integral.

1) $\int \cos x \, dx$

2) $\int -5\sin x \, dx$

3) $\int 3 \cdot \sec^2 x \, dx$

4) $\int -3\csc x \cdot \cot x \, dx$

5) $\int \frac{2}{\sec x} \, dx$

6) $\int \frac{5}{\csc x} \, dx$

7) $\int -4\tan x \, dx$

8) $\int -\cot x \, dx$

Differentiation - Logs and Exponentials

Date _____ Period _____

Differentiate each function with respect to x .

1) $y = 4^{4x^4}$

2) $y = 4^{-5x^2}$

3) $y = \log_3 3x^2$

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5) $y = \log_3 (3x^5 + 5)^5$

6) $y = \log_5 (-5x^3 - 2)^3$

7) $y = (4^{x^2} + 2)^3$

8) $y = 3^{(x^4+1)^2}$

9) $y = 3^{\cos 3x^4}$

10) $y = \log_5 \tan 4x^4$