

Calculus Class Worksheet #2 Unit 10 _____

Find dy/dx for each of the following functions.

1. $y = \ln | 3x |$

2. $y = \text{Log} | 3x |$

3. $y = \ln (2x^3)$

4. $y = \text{Log} | 2x^3 |$

5. $y = \ln | 3x + 1 |$

6. $y = \text{Log} | 3x + 1 |$

7. $y = \ln | \csc x |$

8. $y = \text{Log} | \csc x |$

Integrate each of the following.

9. $\int \frac{dx}{3x+2} =$

10. $\int \frac{x dx}{x^2+4} =$

11. $\int \tan x dx =$

12. $\int \sec x dx =$

Hint: $\sec x = \frac{(\sec x)(\sec x + \tan x)}{\sec x + \tan x}$

13. $\int \frac{x^2 + 2x - 9}{x + 5} dx =$