

Calculus Class Worksheet #1 Unit 10

Find dy/dx for each of the following functions.

1. $y = e^{4x}$

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

3. $y = e^{\cos x}$

4. $y = 5^{\tan x}$

5. $y = e^{x^3}$

6. $y = 4^{x^2}$

Integrate each of the following.

7. $\int e^{4x} dx =$

8. $\int 3^{3x} dx =$

9. $\int \sin(2x) e^{\cos(2x)} dx =$

10. $\int \sec^2(x) 5^{\tan(x)} dx =$

11. $\int e^{(2x)} \sin(e^{(2x)}) dx =$

12. $\int 5^x \sec^2(5^x) dx =$