

Math 2315 - Calculus 2

Calculus 1 Review Questions Part 2 - Differentiation

Find $\frac{dy}{dx}$ for the following functions.

1. $y = \tan(x) + \cot(x) + \log_2(x)$

2. $y = \sin(x) \cos(x^2)$

3. $y = \tan^{-1}(3x)$

4. $y = \ln\left(\frac{3x^2 - 1}{3x^2 + 1}\right)$

5. $y = e^{\sin(x)} \cos(x)$

6. $y = \frac{\cos(x)}{\sqrt{3 + x^2}}$

7. $\cos(xy) = x^2 + y^2$

8. $f(y)^{g(x)} = h(x)$

9. $f_1(x)^{f_2(y)} = f_3(y)^{f_4(x)}$

10. $y = \log_5\left(e^{\sin(x)} + x\right)$