

Chapter 27 Review

Find the derivatives of the following:

1. $y = 3x^4 - 2x^3 + \pi x + e$

2. $f(x) = \sin 2x \ln(x - 1)$

3. $f(x) = \cos^4(x^3 - 2)$

4. $y = \frac{\sqrt{2x^2 - 3}}{4^x}$

5. $f(x) = e^{4x} \tan^{-1}(x^3 + x)$

6. $y = 2x^4 \sec(e^x - 1) + \sin^{-1} 5x$

7. $y = 6 \csc(\ln x) - \sqrt[3]{4x + 2}$

8. $2x - 4x \ln y = 3 \sin(xy) + 2$ (find $\frac{dy}{dx}$)