

MATH 31 - Calculus. Homework 4. Due Th. 10/07/2026. Professor Luis Fernández

NAME: _____

Write your answers here.

Find the derivative of the following functions. Do not simplify

1. $f(x) = 4x^5 - 3x^3 + 7x - 2.$

2. $f(x) = 6x^7 - 5x^4 + 2x^2 - 9.$

3. $f(x) = e^x + 3x^4 - 5x^2 + 8.$

4. $f(x) = 4e^x - 7x^3 + 2x - 6.$

5. $f(x) = x^3e^x.$

6. $f(x) = (x^2 + 1) \sin x.$

7. $f(x) = \frac{x^3 + 2}{x^2 - 1}.$

8. $f(x) = \frac{e^x}{x^2 + 1}.$

9. $f(x) = 5 \sin x - 3 \cos x + 2x^4.$

10. $f(x) = x^2 \cos x + e^x \sin x.$