Math 122 Worksheet 7

Show all work for full credit.

1. Find the derivative $f'(x)$.

$$f(x) = (8x^3 - x + 1)^6$$

2. Find the derivative $f'(x)$.

$$f(x) = \ln(5x^6 - 4x^3 + 7)$$

3. Find the derivative $f'(x)$.

$$f(x) = \sqrt[4]{10x^4 + 3x^2 - 5}$$

4. Find the derivative $f'(x)$.

$$f(x) = 5^{x^3+7x^2-1}$$

5. Find the derivative $f'(x)$.

$$f(x) = \left(\frac{9x^3 + 4x^2}{8x^5 - 2}\right)^7$$

6. Find the derivative $f'(x)$.

$$f(x) = (2x^7 + 3x^3)^{1/3}(6x^5 - 2x^4)^9$$

7. Find the derivative $f'(x)$.

$$f(x) = \frac{\ln(3x^4 + 5x)}{(8x^3 + 7)^4}$$

8. Find the derivative $f'(x)$.

$$f(x) = e^{x^3+2x+1} + (6x^5 - 7x^3 + 2)^4$$

9. Find the derivative $f'(x)$.

$$f(x) = \frac{5}{\sqrt[5]{7x^4 + 2x^3 - 1}}$$

10. Find the derivative $f'(x)$.

$$f(x) = \frac{2^x(x^7 - x)}{(3x^8 + 7x^2 - 5)}$$