

## MATH 122 WORKSHEET 7

Show all work for full credit.

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

$$f(x) = (7x^5 - 3x^4 + 1)^9$$

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

$$f(x) = \ln(x^8 - 5x^3 + 2)$$

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

$$f(x) = \frac{25}{\sqrt[5]{x^5 + 32x}}$$

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

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

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

$$f(x) = \left( \frac{9x^2 + x - 1}{7x^3 + 5} \right)^{10}$$

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

$$f(x) = e^{x^5 - 3x + 2} + \sqrt[3]{x^9 - 8x^3}$$

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

$$f(x) = (3x^8 + 4x)^7 \ln(x^7 - x^3)$$

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

$$f(x) = \frac{(5x^6 - 4x^2)^3}{(8x^3 + 1)^7}$$