

1. Use the function f and the given real number a to find $(f^{-1})'(a)$.

$$f(x) = \frac{x^5 + 2x^3}{27}, \quad a = -11$$

2. Find the derivative of the function.

(a) $y = \frac{2}{e^x + e^{-x}}$

(b) $y = \log_2 \sqrt[3]{2x+1}$

3. Find the integral.

$$\int \frac{e^{x^{-2}}}{x^3} dx$$