

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

$$f(x) = \frac{x+6}{x-2}, \quad x > 2, \quad a = 3$$

2. Find the derivative of the function.

(a)  $y = \ln \frac{1+e^x}{1-e^x}$

(b)  $y = \log_{10} \frac{x^2 - 1}{x}$

3. Find the integral.

$$\int \frac{2e^x - 2e^{-x}}{(e^x + e^{-x})^2} dx$$