

1. Differentiate:

$$f(x) = \frac{e^{5x}}{x+1}$$

$$f(x) = x \ln \sqrt{x^2 - 3}$$

$$f(x) = \log_3(5x)$$

2. Use logarithmic differentiation to find the derivative of the following function.

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

Q: What has four wheels and flies?