

MCV 4U
5.4

Differentiation Rules for Exponential Functions

Some Derivatives

Calculate the following derivatives:

a) $f(x) = xe^x$

Some Derivatives

$$\text{b) } f(x) = 5e^{2x-3}$$

Some Derivatives

$$c) f(x) = x^6(4^x)$$

Some Derivatives

$$d) f(x) = x^6(4^x)$$

Some Derivatives

$$e) f(x) = (3\cos^7 x)(9^{5x-2})$$

Extreme Values

Identify the local extrema of the function $f(x) = xe^x$



Graph

Homework

HW pg. 282 # 2 - 5, 9