PREFECTURA DE PICHINCHA
¡Dejamos huella!

(12) $f(x) = \frac{\tan x + 1}{\tan x - 1}$

$f'(x) = \frac{(\tan x - 1)(\tan x + 1)' - (\tan x + 1)(\tan x - 1)'}{(\tan x - 1)^2}$

$f'(x) = \frac{(\tan x - 1)(\sec^2 x) - (\tan x + 1)(\sec^2 x)}{(\tan x - 1)^2}$

$f'(x) = \frac{\sec^2 x \tan x - \sec^2 x + \tan x \sec^2 x - \sec^2 x}{(\tan x - 1)^2}$

$f'(x) = -\frac{2\sec^2 x}{(\tan x - 1)^2}$ //

(2)

① $f(x) = (2x+1)^3$

$f'(x) = 3(2x+1)^2(2x+1)'$

$= 3(2x+1)^2(2)$

$= 6(2x+1)^2$ //

④ $f(x) = (x^2+4x-5)^4$

$f'(x) = 4(x^2+4x-5)^3(x^2+4x-5)'$

$f'(x) = 4(x^2+4x-5)^3(2x+4)$

$f(x) = 8(x+2)(x^2+4x-5)^3$ //

③ $f(x) = (x^2+4)^{-2}$

$f'(x) = -2(x^2+4)^{-3}(x^2+4)'$

$f'(x) = -2(x^2+4)^{-3}(2x)$

$f'(x) = -4x(x^2+4)^{-3}$

$f'(x) = -\frac{4x}{(x^2+4)^3}$ //

Síguenos en:

Prefectura de Pichincha

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