

Thursday - February 11, 2016

$$y^{(4)} = y'''' = 4^{\text{th}} \text{ derivative of } y$$



$$\textcircled{5} \quad y = -\cos x \ln |\sec x + \tan x| \quad (y'' + y = \tan x)$$

$$y' = \frac{(-\cos x) \frac{1}{\sec x + \tan x} (\sec x \cdot \tan x + \sec^2 x) + (\sin x) \ln |\sec x + \tan x|}{}$$

$$y' = \frac{(-\cos x) (\cancel{\tan x + \sec x}) (\sec x)}{(\sec x + \tan x)} + (\sin x) \ln |\sec x + \tan x|$$

$$y' = -1 + (\sin x) \ln |\sec x + \tan x|$$

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$$y' = -1 + (\sin x) \ln |\sec x + \tan x|$$

$$y'' = (\sin x) \cdot \frac{1}{\sec x + \tan x} \cdot (\sec x \tan x + \sec^2 x) + (\cos x) \ln |\sec x + \tan x|$$

$$y'' = \frac{(\sin x) (\sec x) (\cancel{\tan x + \sec x})}{(\sec x + \tan x)} + \cos x \ln |\sec x + \tan x|$$

$$y'' = \tan x + \cos x \ln |\sec x + \tan x|$$

$$\textcircled{19} \quad y = Ce^{kx}$$

$$y' = Cke^{kx}$$

$$y' = .07y$$

$$y = Ce^{.07x}$$

$$y' = .07Ce^{.07x}$$

$$Cke^{kx} = .07Ce^{kx}$$

$$k = .07$$

$$.07Ce^{.07x} = .07Ce^{.07x}$$