

31.1 #27

$$(\sec x + \tan x) y = x + C$$

$$\Rightarrow (\sec^2 x + \sec x \tan x) y + (\sec x + \tan x) \frac{dy}{dx} = 1$$

$$\Rightarrow \sec x (\sec x + \tan x) y + (\sec x + \tan x) \frac{dy}{dx} = 1$$

$$\Rightarrow \sec x y + \frac{dy}{dx} = \frac{1}{\sec x + \tan x}$$

$$\Rightarrow y + \cos x \frac{dy}{dx} = \frac{\cos x}{\sec x + \tan x}$$

$$= \frac{\cos^2 x}{1 + \sin x}$$

$$= \frac{1 - \sin^2 x}{1 + \sin x}$$

$$y + \cos x \frac{dy}{dx} = 1 - \sin x$$

↑
DE