AP COLC AB: 2.4 A HW

. 2. 100 = x 105 x + 2 tan x 12. y= 105x f'(x)= x = 105 x + 105x = x + = 2+an x $y' = \frac{\partial}{\partial x} \cos x - \cos x \cdot \frac{\partial}{\partial x} \left[1 - \sin x \right]$ $\left(1 - \sin x \right)^{2}$ = - x sinx + cos x + 2 sec2 x $= \frac{(1-\sin\alpha)(-\sin\alpha) - \cos\alpha(-\cos\alpha)}{(1-\sin\alpha)^2}$ $= \frac{-\sin x + \sin x^2 + \cos^2 x}{(1-\sin x)^2}$ y' = d 2 secx - d cscx = 2 secx tank + escx cot x = (1-sinx) 6. g(+) = 4 sect + tant g'(+) = d 4 sect + d tant = 4 sect tant + sec2+ y'= (1+tant) of sint - sint of (1+ tant) 8. y= v (acosu + brotu) $= \frac{(1+\tanh)(\cos t) - \sin t \cdot \sec^2 t}{[1+\tanh]^2}$ 3 = 0. d (a cosu + b cotu) + (a cosu + b cotu) d o = v (-asinu-bese2v) + a cosu+bco+v 16. 4 = x2 sinx tanx $y' = x^2 \sin x \cdot \frac{\partial}{\partial x} \tan x + \tan x \frac{\partial}{\partial x} \alpha^2 \sin x$ 10. y = sin 0 cos 0 y' = sin 0 . 20 cos0 + cos0 . 20 sin 0 = x2 sinx sec2 x + tanx [x2 of sinx + sinx of x2] = - sin20 + cos20 = x2 sinx sec2x + tanx [x2 cosx + 2x sinx] = - (1-10520) + 10520 . - same
answer. = 200520-1

$$= \frac{\sin \alpha}{\cos \alpha} \cdot \frac{1}{\cos \alpha}$$

(1+0)(-sin 0) + ros 0 = 1

1		- (2	or	
7	-3	-,			

 $y' = \frac{\partial}{\partial x} x + \frac{\partial}{\partial x} \tan x$

= 1+ Sec2 x

$$1 + \frac{1}{\cos^2 \pi} = 2$$