NO. DATE: $(2) f(x) = \frac{\cot x}{1-\sin x}$ et u= cot x 1 = 1 - sinx $du = -csc^{2}x$ $f'(x) = \frac{Vdu - udv}{v^{2}}$ dv = - cosx $= (- \frac{1 - \frac{1}{2} - \frac{1$ = -csc3x + sinx csc2x + cot x cos x > distribute (-csc3x) (1 - sin x) to (1-sin x) cscx + sinx (sinxx) + coxx cosx > cscx = sinx $(1-\sin x)^2$ f'(x)= - csc2x + csc x + cot x cosx (1- sin x) let $y = 1 + \sin x$ $y = 1 - \sin x$ sale. Co. UK $du = \cos x \qquad dv = 1 + \cot x$ $f'(x) = (1 - \cot x) (\cot x) (1 + \cot x) (1 + \cot x)$ teinx (1+sin x) (+ les x) >f'(x)=vdu-udv cos x + sin x cocx $(1-\sin x)$ f'(x) = 2 cos x (1-sinx)2 let u= sin x-1 N= Cos x + du = cosx c dv = - sin x $f'(x) = (\cos x + 1)(\cos x) - (\sin x - 1)(-\sin x)$ 12 Vdu - udv (cos x+1)2 cos2x+ cosx+ sin2x - sinx $(\cos x + i)^2$ but cos2x + sin2x = $f'(x) = 1 + \cos x - \sin x$ (cosx+1)

VICTORY

NO. DATE:

 $(2s) f(x) = (x - \sin x) (x + \cos x)$ et u=x-sinx v=x+cosx du = - cos x dv = -sin x f'(x) = (x - sin x) (-sin x) + (x + cos x) (-cos x) budv + vdu =-xsinx+sin2x-xcosx+cos2x but sin2x + cos x = $1 - x \sin x - x \cos x$ = $1 - x (\sin x + \cos x)$ $f(x) = (x^2 + \cos x)(2x - \sin x)$ X 2x Sinx V = 2x - Sin X du= 2x - sin x f(x) = ydy + vdu $= (x^{2} + \cos x) (2 - \cos x) + (2x - \sin x) (2x + \sin x)$ $(x) = (x^{2} + \cos x)(2 - \cos x) + (2x - \sin x)(2x + \sin x)$ $(x) = (2 \cos x - 1) (2x - \sin x)(2x + \sin x)$ sc x de 6 of 1? V = csc x + 2 du=-cscx cotx (x) = (csc x + 2) (- zcsc x cot x) - (2csc x -1) (-csc x cot x) (csc x + 2)2 escxcotx-4 cscxcotx+2cscxcotx-cscxcotx (csc x + 2)2 f'(x) = -5 csc x cot x (cscx+2)2 28) F(A)= let u= tan y + 1 y) - (tany +1) (sec tan 1 - 1)2 (tany-1) - (tany+1)