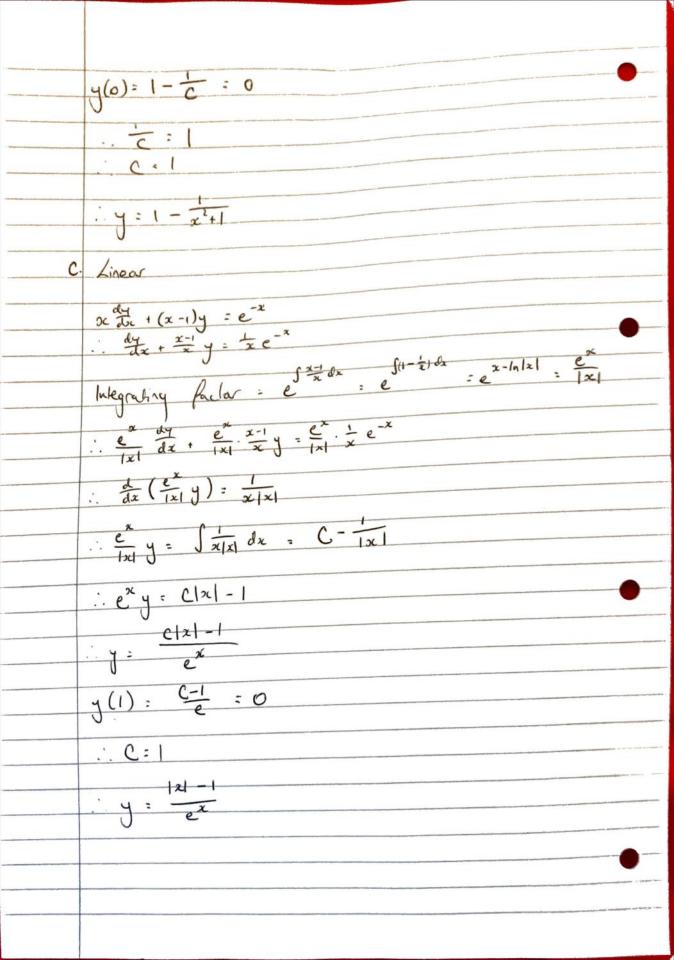
Mathe Syperusion Work ?

5a. Seperable it dx = cos 2 Jyth dx dx : Jost, dx · arctar (y) : tan(a) + C y = ten (ten x + c) y(0) = tan(tan 0 + c) : C = arctor O = KTI for some integer to, w.1.o.g. take to: y = tan (tan (x)) b. Seperable dx + 4xy = 1x(y2+1) : dx = 2 × (y2+1) - 4 × y = 2 × (y2+1 - 2y) = 2 × (y-1)2 (4-1)2 dx = 2x :. \(\left(y - 1)^2 \, dx \, dx = \int 2x \, dx $\frac{1}{1} - \frac{1}{1} = x^2 + C$

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

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



: x du = 2+34 - 1-4 2+24+42 · 2+24+22 du 1 J 2+24+42 du doc = 1/2 dx Let I = \ \frac{1-u}{2+2u+u^2} du = 1 2+2n+n2 du - 1/2 ln |2+2n+n2| = \ \ \(\left(\alpha + 1)^2 + 1 \ \du - \left(2 \ \left| \ 2 + 2 u + u^2 \right) = 2 arctar (u+1) - 1/2 lu | 2+ 2 u + u2 | +2C · 2 archar (u+1) - /2 ln |2+24+22 = ln |x | +2C · 2 arctar(u+1)=2C+ly |x(2+24+22)/2/ · · · Larefor (u+1) = LC+ ln | (2x2+2xy+y2)/2/ : orctan (u+1) = C+/4/n 2x2+2xy+y2 : orchan (1/x+1) = C+/4/4/2x2+2xy+y2/