3. Separable Variables	No: Date: 20-1-2023
	1) e 34 dx = sec' x, y (17) = 0
Order: 2	Se 27 dy = S sec x dx
pegiee:1	$\frac{o^{2y}}{2} = tan \times t C$
	$\frac{e^{2(0)}}{2} = \tan \frac{\pi}{4} + c$
(p) (qx), = (1+ qx)3	1 = 1 H
Older : 2	(=- +
Degree: 2	$\frac{e^{2y}}{2} = \tan x - \frac{1}{2}$
	e = 2 tann-1
$2(9) \frac{dy}{dx} - 6x^2y$	Ine " = In/2 + an x - 11
Stody = Sox dx	24 = In [) tan x - 1/
5 + d4 = 6 5x 2 dx	$y = \frac{1}{2} n ^2 + 9n n - 11$
$ln \gamma l = 6 \left(\frac{\varkappa^3}{3} \right) + c$	
$ n + = 2x^3 + c \tag{b}$	X dy = NY+Y, Y(3)=2
1 y = e 2x3+c	$y \frac{dy}{dx} = y(x+1)$
y = e ^{2x3} -e ^c	$\frac{1}{y} dy = \frac{n+1}{n} dx$
Y = Ae 2n3	$\int \frac{1}{y} dy = \int 1 + \frac{1}{n} dn$
	n y = x + n x + c
(b) $(x+1)\frac{dy}{dx} = 3(y+1)$	$y = e^{x + \ln x + \epsilon}$
$\frac{1}{y+2}\frac{dy}{dx} = \frac{3}{(x+1)}$	y= e x - e n x - e c
$\int \frac{1}{y+z} dy = \int \frac{1}{(x+1)} dx$	Y = A ne n
In y+2 = 3 n x +1	when x = 3, y=2
$\frac{3 n x+1}{3+2} = \frac{3 n x+1}{3}$	2=A13)e3
Y= e 3/n/n+11-2	2 = A
y - e	$A = \frac{2}{3e^3}$; $y = \frac{2}{3} \times e^{\chi - 3}$
dv	
$\frac{dv}{dt} = z - v$	
$V \frac{dv}{dt} = 2$	
V dv = 2dt	
$\int v dv = \int 2 dt$	
$\frac{V^2}{2} = 2t$	
v'= 4t	
V = 7 t	
$V = 7t$ $V = (2t)^{\frac{1}{2}}$	

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, at .		
		$\begin{bmatrix} e^{y} \frac{dy}{dx} + \frac{1}{x} = \frac{e^{y}}{x} \end{bmatrix}$
31	(c) xydx+(1+x2)dy=0, y(1)=2 5.	6 gr , x
	Kydx = -(1+ x2)dv	$e^{\frac{y}{\sqrt{dy}}} = \frac{e^{\frac{y}{y}} - \frac{1}{x^2}}{e^{\frac{y}{\sqrt{dy}}} = \frac{e^{\frac{y}{y}} - 1}{x^2}}$ $e^{\frac{y}{\sqrt{dy}}} = \frac{e^{\frac{y}{y}} - 1}{x^2}$
		e Jr = r
	1+ N= d N = - + dy	$e^{y}dy = \frac{e^{y-1}}{r}dr$
	$\int -\frac{1}{y} dy = \frac{1}{2} \int \frac{2\chi}{1+H^2} dH$	Terdy = Sindu
	$-1ny = \frac{1}{2}ln(1+n^2)+c$	$\frac{e^{\gamma}dy = \gamma d\mu}{\int \frac{e^{\gamma}-1}{e^{\gamma}-1}dy = \int \frac{1}{\pi}d\mu}$ $\frac{\ln(e^{\gamma}-1) = e^{\ln(\mu+1)}}{e^{\mu+1}}$
	Iny = In(1+ x2) =+6	e 1-1= x-e c
	$\frac{1}{y} = (1+x^2)^{\frac{1}{2}} - e^{-c}$	6,-1-7,-6
		$e^{\gamma} - 1 = A\kappa$
	Y = ANI+N2	e Y = A N+1
	when N=1, Y=2	y = 1 n /A x + 1/2 4 = 14
	$\frac{1}{2} = A\sqrt{2}$	y = 1 m 1/1 m
		In 2 = In A + 1
	$A = \frac{1}{2\sqrt{2}}$ $\frac{1}{y} = \frac{1\sqrt{1+\kappa^2}}{2\sqrt{2}}$	A = 1 1 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
	y = 2√2	= Y = /n x + 1 x = x x x x
	$y = \frac{2\sqrt{2}}{\sqrt{1+n}}$	Y = /// / / //
	$=2\sqrt{\frac{2}{1+n^2}}$	
	N 1+ N 2	The state of the s
	Tv v	No. of the second secon
4.	$\ln x \frac{dy}{dx} = \frac{+qny}{x}$	
- Control of the Cont	In Ndy = tany dn lety = Inx	
		TINDESCRIPTION OF THE RESIDENCE
	$\frac{1}{\tan y} dy = \frac{1}{\pi \ln \kappa} d\kappa \qquad \frac{dy}{dn} = \frac{1}{\pi}$	A STATE OF THE STA
No. of the last of	Sciny dy = Sxinn dx du= ndx	
Park control		
	In(siny) = Sudu	
all little	In(siny)=In(4)+(
	In (siny) = In(In u) +c	
***************************************	sin y = (/hx) -e c	
- de la companya de l	siny = Aln X	
	Y=sin-1(Alnx)	