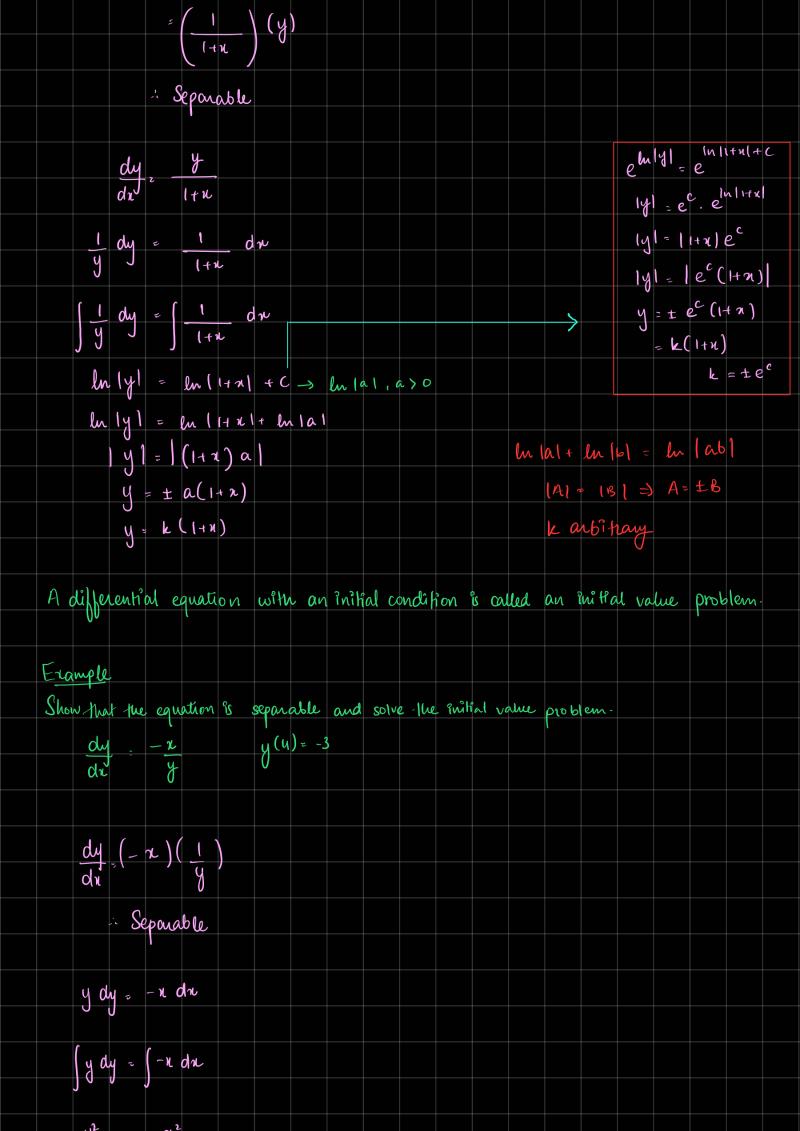


	Mon Exact
	Homogeneous
	Bernoulli
Se	parable Differential Equations
Ę	
AJ	first order differential equation is said to be separable if it is of the John
<u> </u>	
	$\frac{dy}{dn} = g(n) \cdot h(y)$
Fra	mple
	ch of the following equations are separable?
1.	$\frac{dy}{dy} - y^{2}ne^{3n+4y} = 0$
	dil
2.	$dy - y = sin \pi$
	ohi g
1.	dy xu ² e ^{3x + 4y}
	$\frac{dy}{dx} = xy^2 e^{3x+4y}$ $\frac{dy}{dx} = xe^{3x} e^{4y} \cdot y^2$
	$=(\chi e^{3\chi})(\chi^2 e^{4\psi})$
	g(n) () () h(y)
	: Equation is separable
2.	$dy = y + sin \pi + \left(g(x) \setminus (n(y))\right)$
	$\frac{dy}{dx} = y + s^2 n \pi + \left(g(x)\right) \left(n(y)\right)$
	Not separable
Ezan	up le
	w that the equation is separable and solve it.
	(1+x) dy - y dx = 0
	(1+n) dy = y dn
	(1+n) dy = y dn dy = y
	dn (1+x)



		1 2 = - 2 + C
$(-3)^{1} = -(4)^{2} + 2c$ $q = -16$, R $c = 2T$ Solution is		
$(-3)^{1} = -(4)^{2} + 2c$ $q = -16$, R $c = 2T$ Solution is		when n=4, y=(-3)
9 16 , R R = 25 Solution is		
9 - 16 R R = 25 Solution is		$(-3)^{2} - (4)^{2} + 2c$
Solution is		
Solution is		g -16 , g
Solution is		
Solution is		ρ = 25
Solution is $y^2 = -x^2 + 25$ $y^2 = 25$		
$y^{2} = -x^{2} + 25$ $x^{2} + y^{3} = 25$		Q a Lu Lo a e e
		2 32 + 35
	2	
	7(-1	y = 25