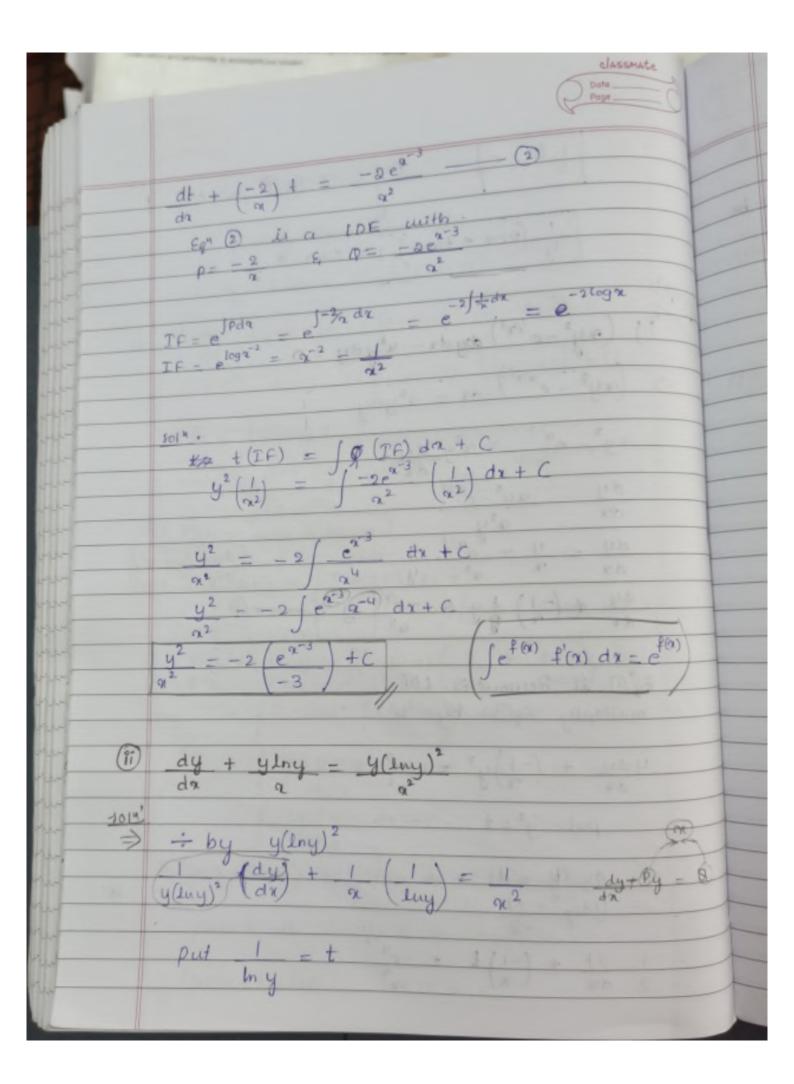
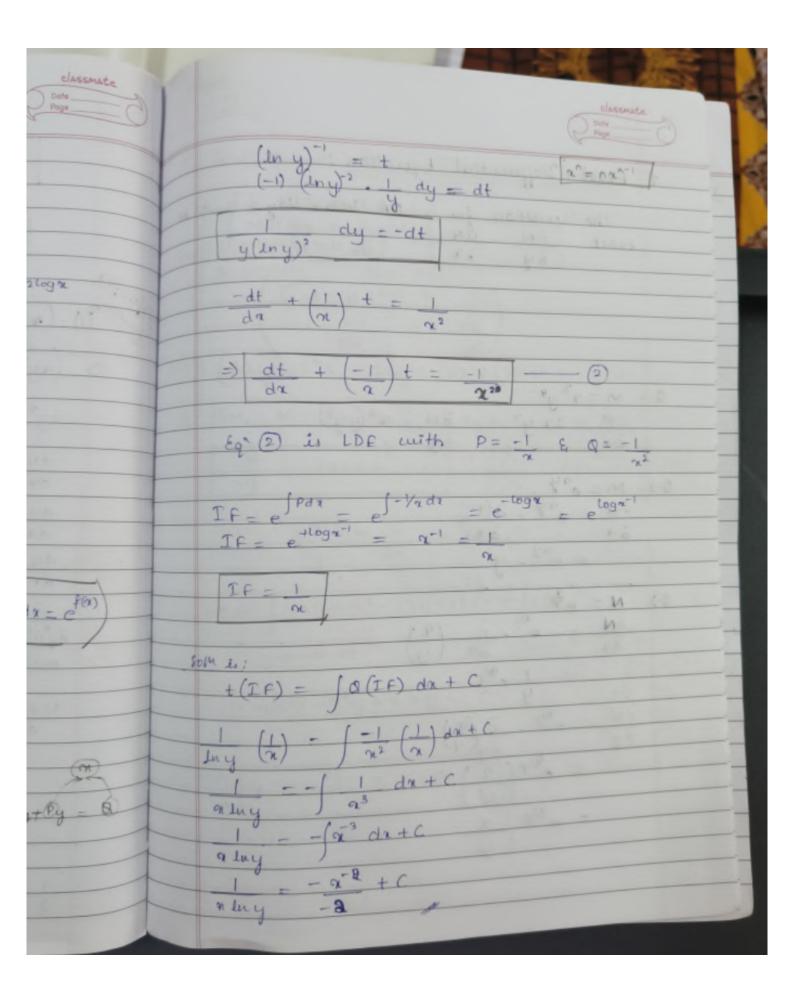
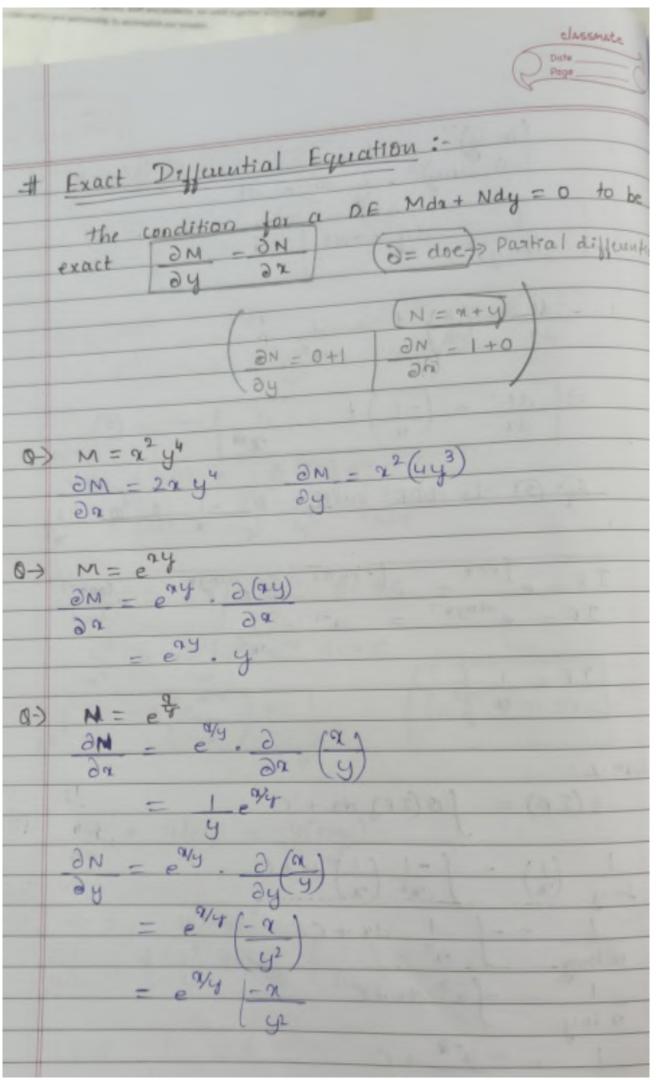


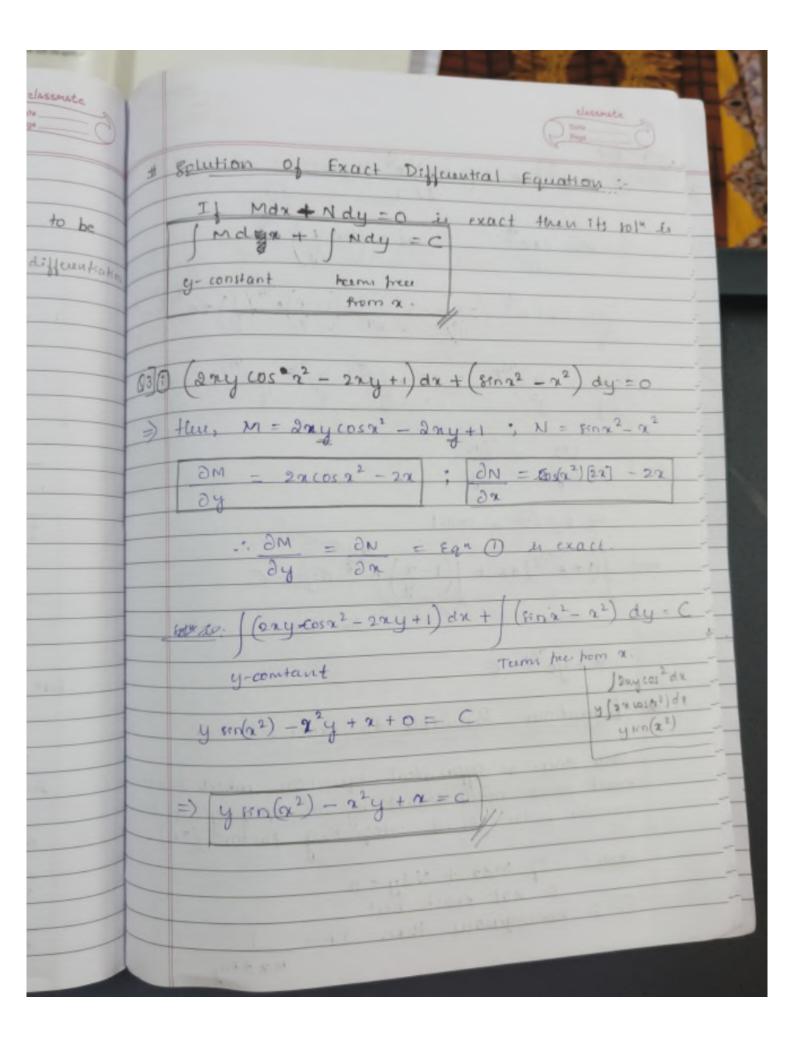
```
put 1 = 1
                     - (1- sina)
  -d+ +
                  = (1- Knx)
   dx
                                             0=(1- sing)
                                 Pasecal &
               a LDE with.
       = [0(IF) d
                                    log eszcr
                     elman
           JPdz
         IF) = 00(IF) dx + C
50 4
                                       KOTS
                     (1- 11nx)
                                        cossi
                              cosx
              1- 15 n2 x
             \cos^2 \alpha dx + C
\cos^2 \alpha
    (secretions) = sing
     put 2=0 & y=2 TO Eq
```

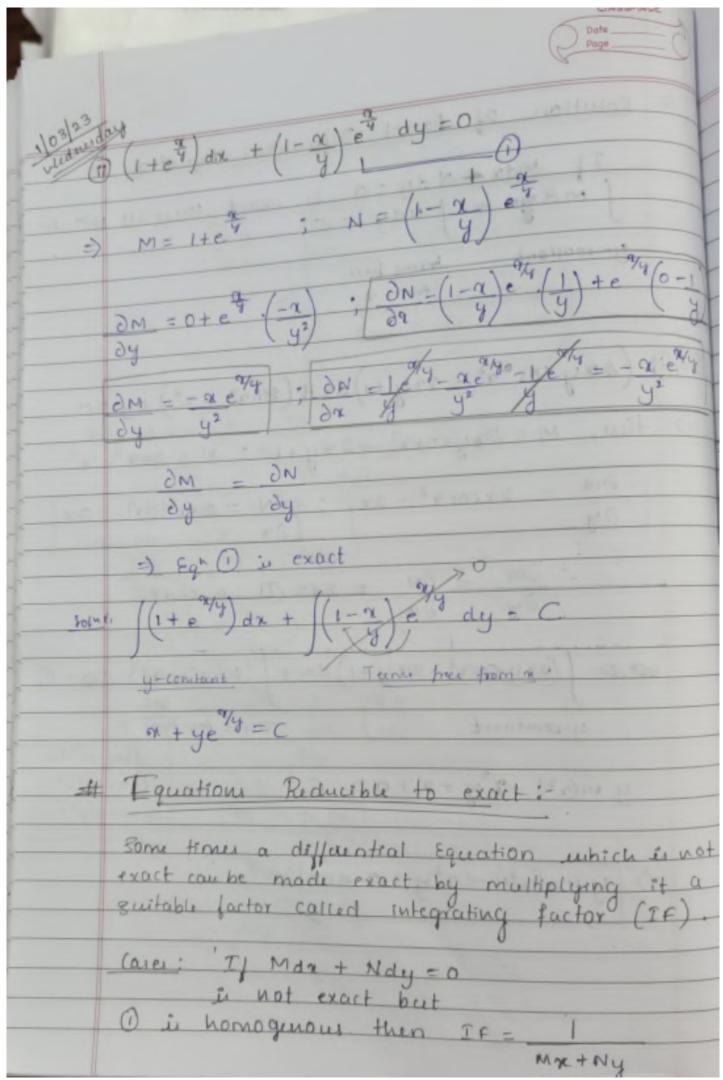
Classmate Date Page	tlascoute
	Care O
	1 (1) = c Put c 10 89 (2)
	1 (secx + tanx) = sinx + 1
In In	
5027	(1) (xy2-e1/23) doyda-22ydy =0
0=(1-5002)	(1) (rg -e / 20gda - 2-ydy = 0
	$= (\alpha y^2 - e^{\alpha^2}) d\alpha = \alpha^2 y dy$
4	$= \alpha y^2 - e^{\alpha^{-3}} = \alpha^2 y dy$
tarr x)	dz
	$\frac{dy}{dx} = \frac{\alpha y^2 - e^{\alpha^{-3}}}{\alpha^2 y}$
ulus	dy - y - ex . 1 - dy + ay - or)
N 1 C 2 2	$\frac{dy}{dx} + \left(-\frac{1}{x}\right) \frac{dy}{dx} = -\frac{e^{2^{3}} \cdot y^{-1}}{a^{2}} = 0$
7+6	$\frac{dy}{dx} + \left(\frac{-1}{x}\right) \frac{dy}{dy} = \frac{-e^2}{a^2} \cdot y^{-1} = 0$
1+0	- 100
	multiply Eq D by 'y'
	$\frac{y dy}{dx} + \left(-\frac{1}{x}\right) y^2 = \frac{-e^{x^{-3}}}{\alpha^2}$
11	$put y^2 = t$
	=> aydy = dt
	2 2 2
	$\frac{1}{2} \frac{dt}{dx} + \left(\frac{-1}{x}\right) t = -e^{x^{-3}}$

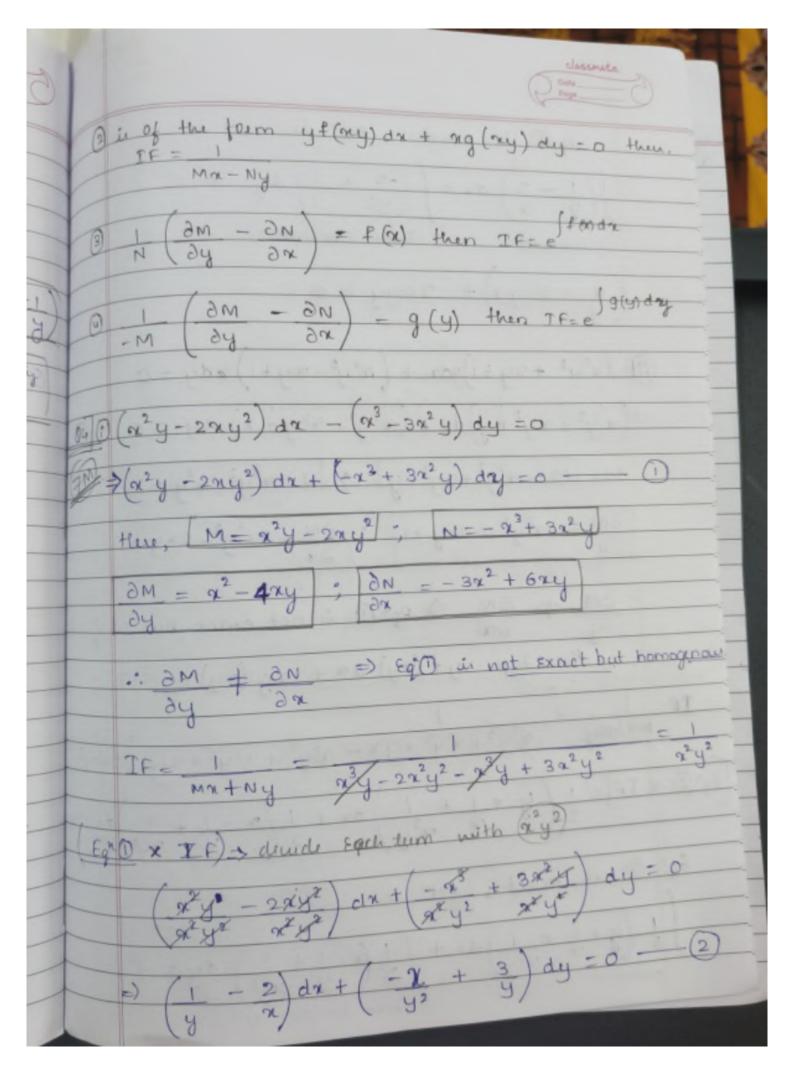


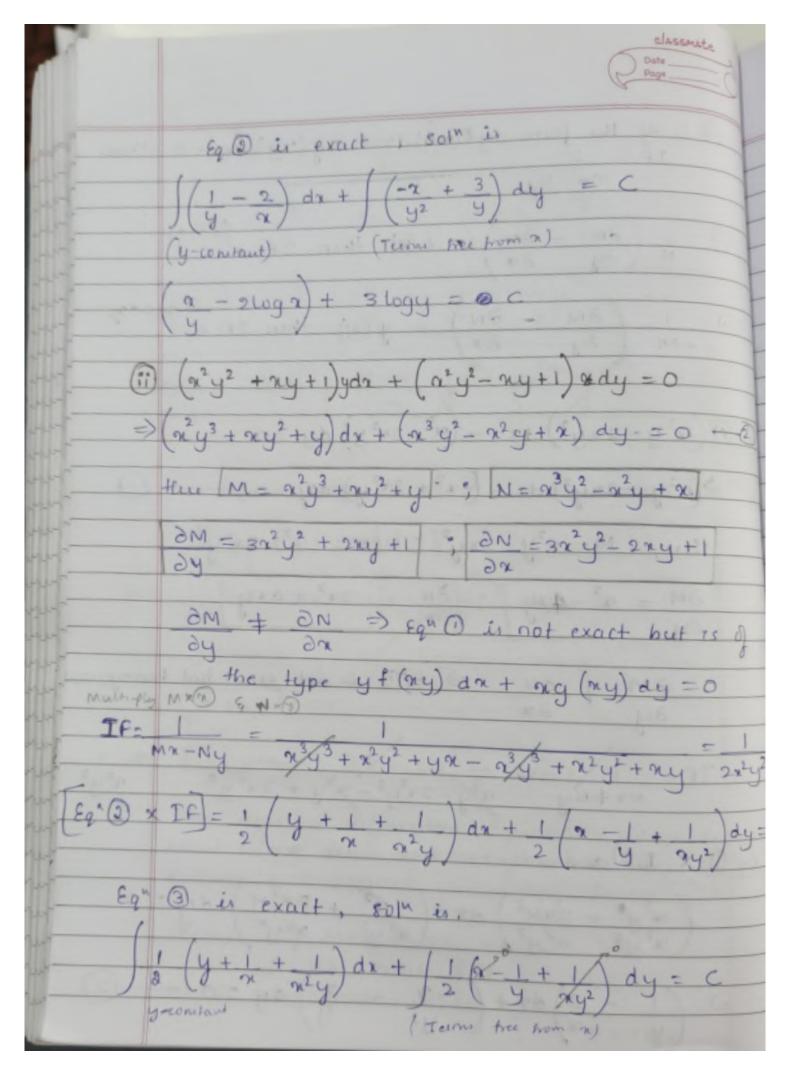


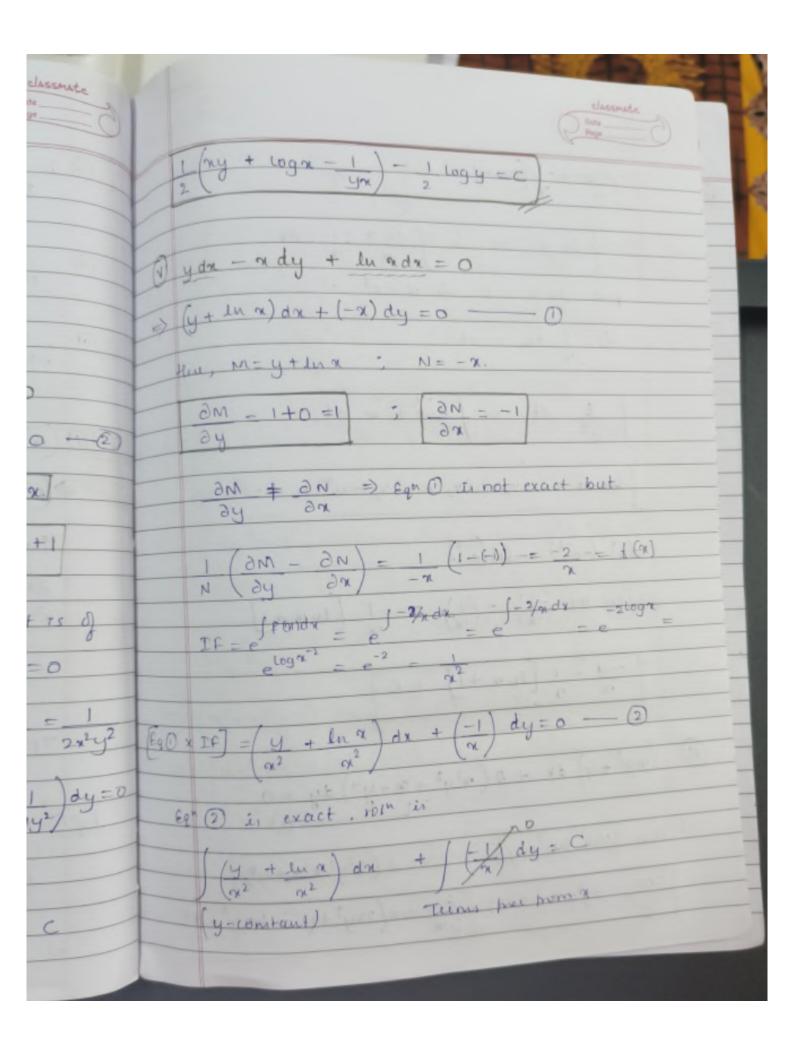


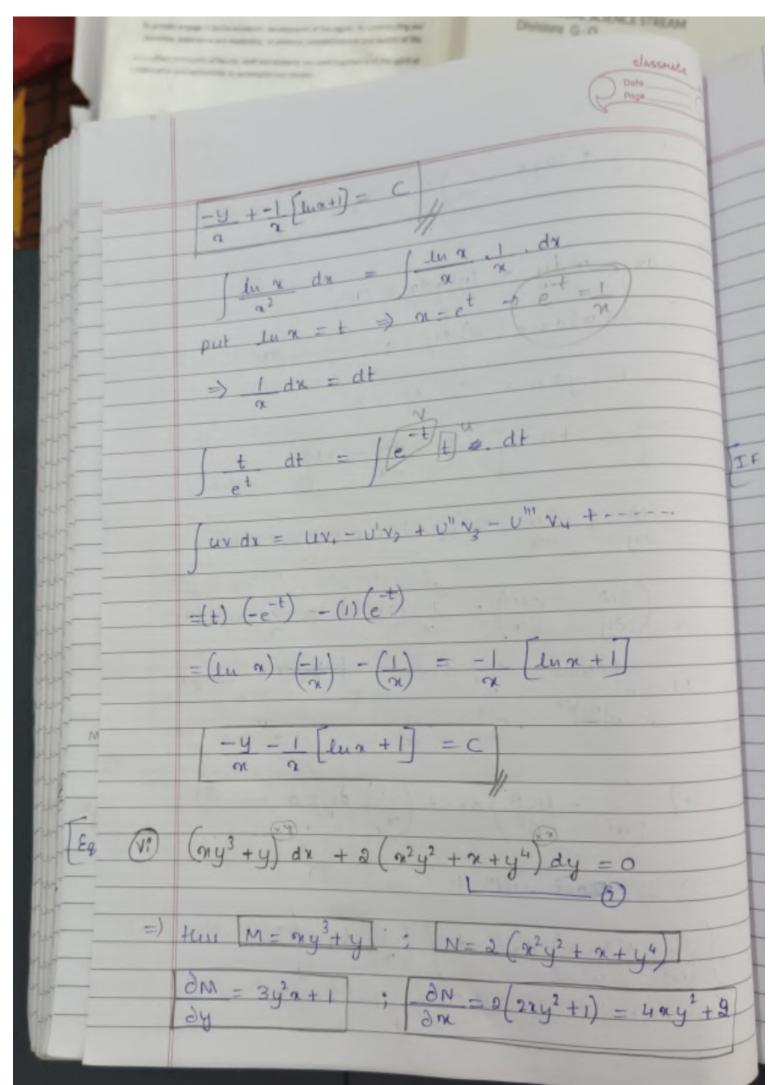


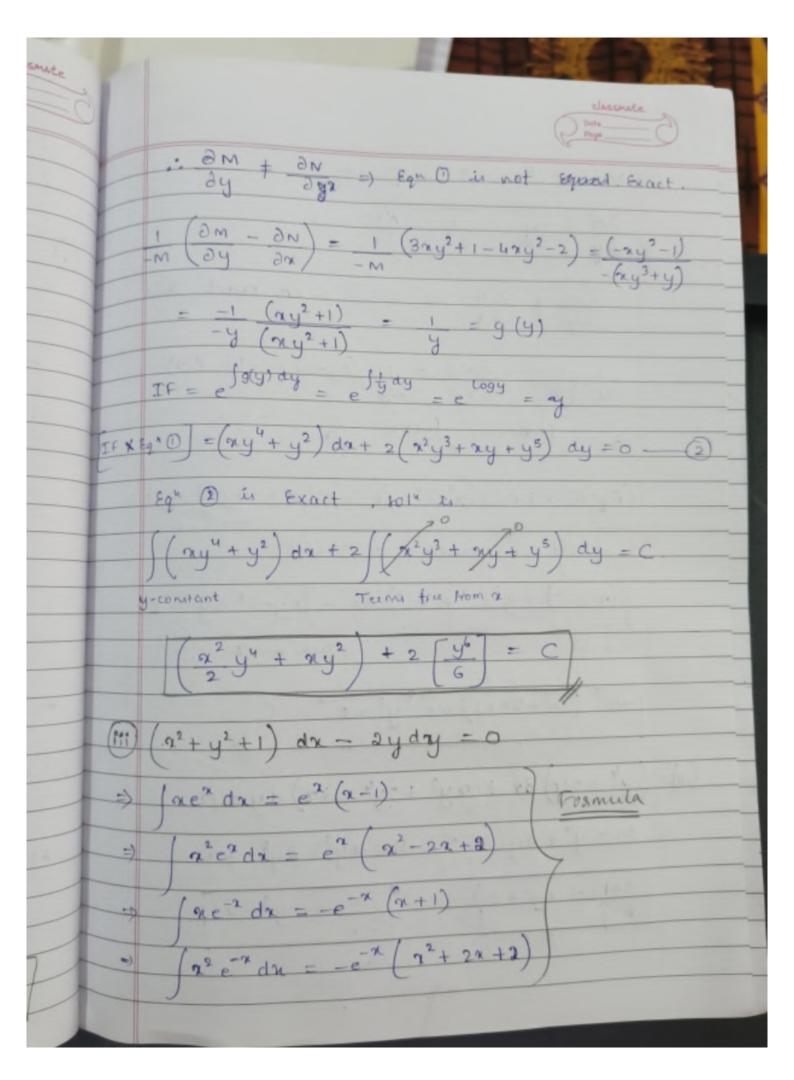


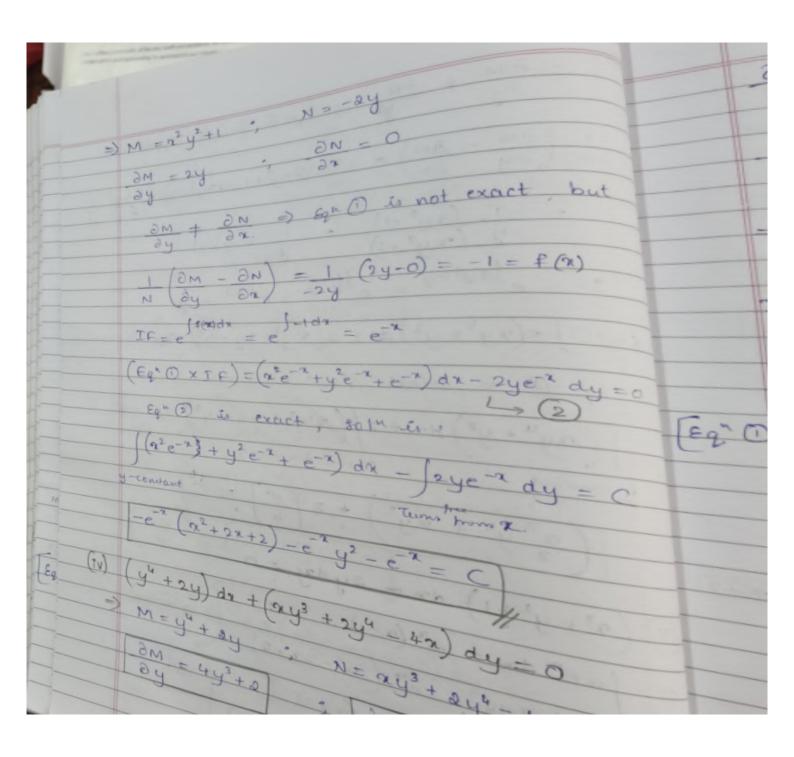


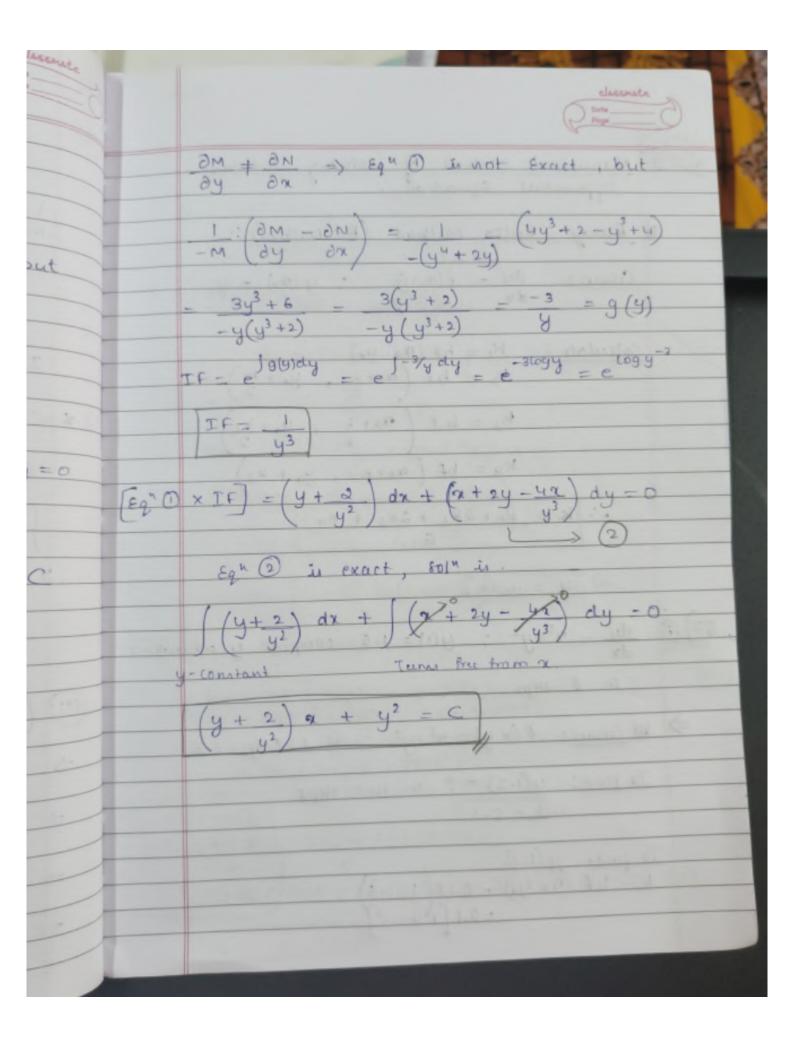


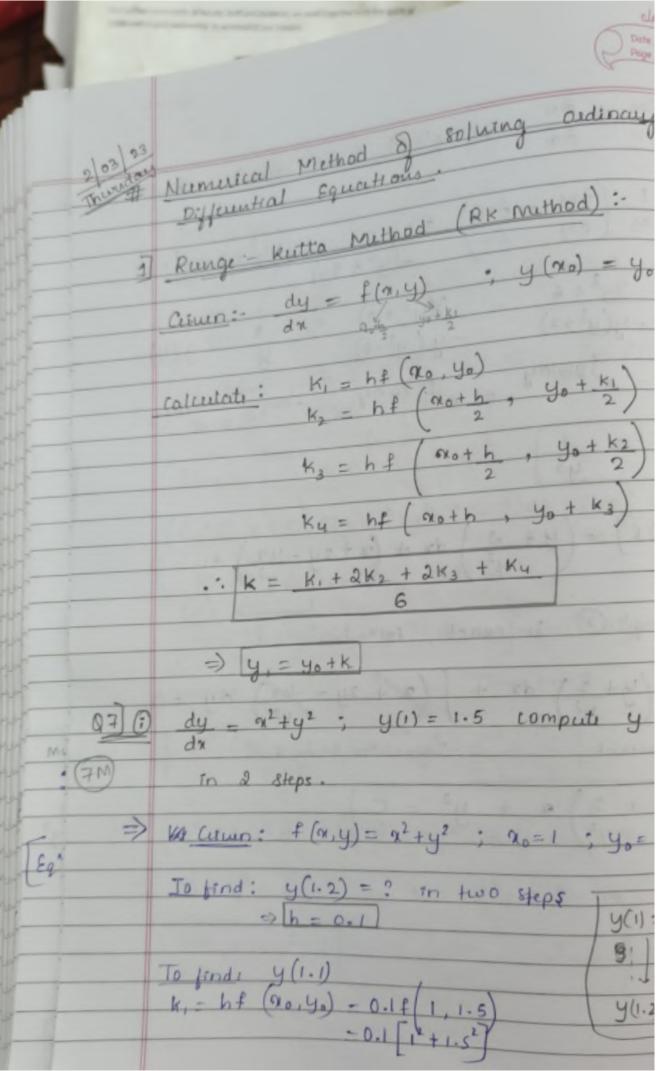






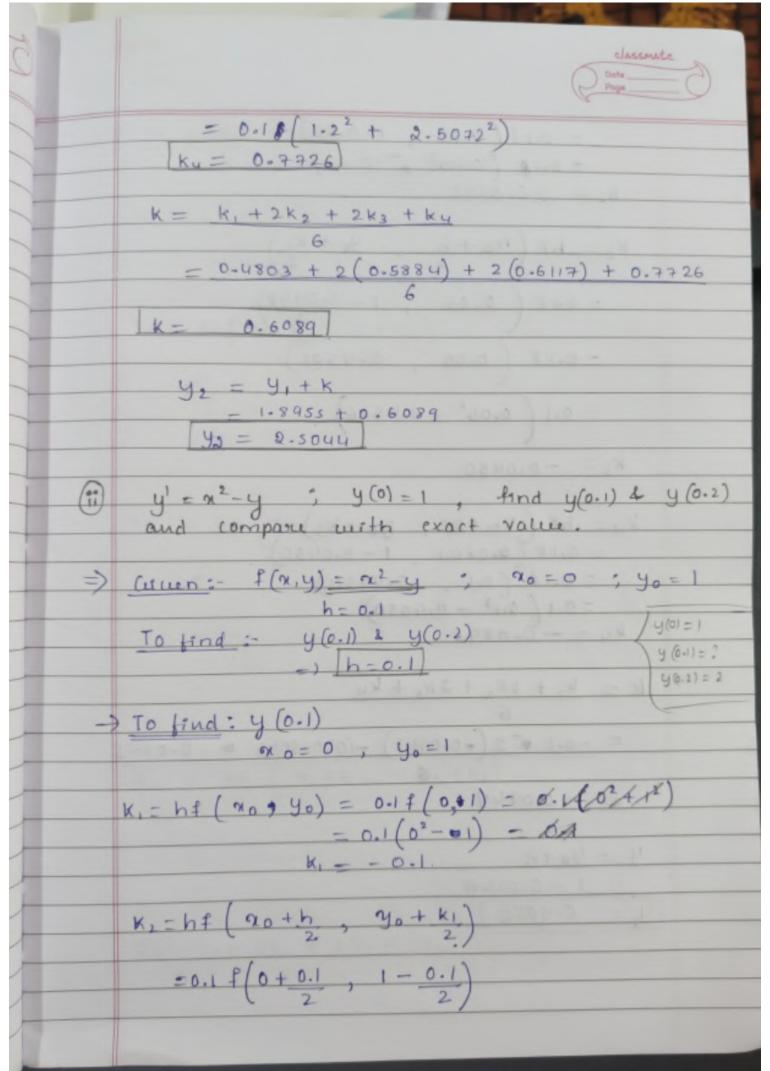






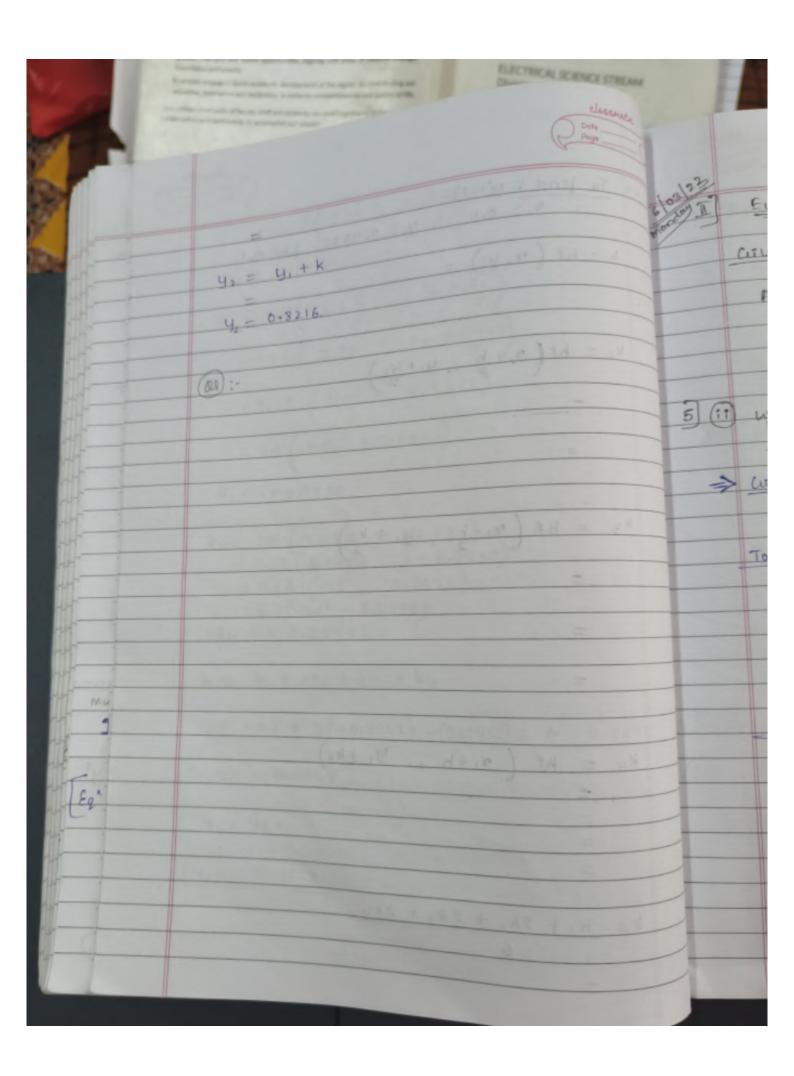
```
K, = 0.3250
                           , yo+k1)
               - O.IF (1.05 , 1.6625)
               = 0.1 $ (1.05) 2 + (1.6625) 2
              = BA 0.3866.
              K3 = hf (00+ h , y0 + k2)
                 = 0.1 $ (1.05 , 1.5 + 0.3366)
                 = 0-1 f (1.05, 1.6933)
                = 0.1 (1.05)2 + (1.6933)2)
             15, = 0. 0.3970
en n=1.2
              Ku = hf (anth, yo+ka)
                 = 0.1f (1+0.1, 1.5+0.3970)
                 = 0.1$ (1.1, 1.8970)
                 - D.1 (1.12 + 1.89702
               Ku= 0.4809
              K = K, + 2k2 + 2k3 + K4
                = 0.3250 + 2 ( 0.3866) + 2 ( 0.3970) + 0.4909
              K = 0.3955
```

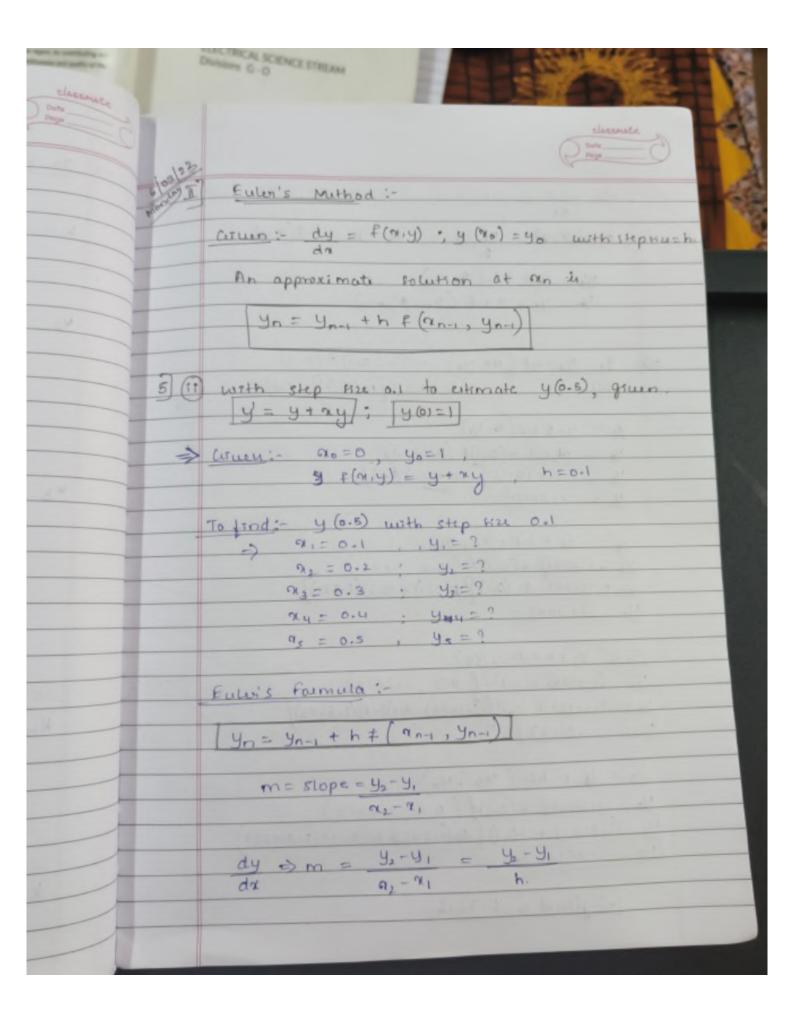
100	Management and Committee and C	1
	Dobe	
	y, yotk y, yotk	
	y = y = 1 × 0 · 3955 y = 1 · 8955	
	11(1-2)	
=	To find: $y(1.2)$ Now $\alpha_1 = 1.1 \xi_1 y_1 = 1.8955$	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	$K_1 = hf(\alpha_1 y_1) = 0.1f(1.14, 1.8955^2)$ $= 0.1(1.1^2 + 1.8955^2)$	
	$K_1 = hf(\alpha_1 y_1) = 0.1f(1.17, 1.8955^2)$ = 0.1(1.12 + 1.8955^2) $K_1 = 0.4803$	
	$k_2 = hf\left(\frac{\chi_0 + h}{2}, \frac{\chi_0 + k_1}{2}\right)$	
	K2 = hf 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	(11)
	$= 0.1 f \left(\frac{1.1 + 0.1}{2} + \frac{1.8955}{2} + 0.4803 \right)$	_
	= 0.18 (1.15, 2.1357)	-/
	= 0.1 \[1.15^2 + 2.1357^2 \]	-
	$K_2 = 0.5884$	
Mu		-
	$k_3 = hf\left(\alpha_1 + h, y_1 + k_2\right)$	
[Eq.	= 0.19 (1.1+0.), 1.8955 + 0.5884)	
Leg-	$=0.1 \pm \left(1.15^2 + 2.1897^2\right)$	
	K = 0.6117)	
	K, = 0.6117	1
	Ky= hf (91,+h, y,+k3) = 0.1 f (1-1+0.1, 1-8955 + 0-6117)	
	(1-1+0.1 , 1-8955 + 0-6117)	1



	tion of	checount	
	in the	Page Page	
		0.05)	To
		$= 0.14 (0.05) - 0.95$ $= 0.14 (0.05^{2} - 0.95)$ $= 0.14 (0.05^{2} + 0.95)$ $= 0.0948$	_
		= 0.18 (0.05	K,
A		$K_2 = -0.0948$ $K_2 = -0.0948$ $Y_0 + K_2$	
		$K_2 = -0.0948$ $K_3 = h^{\frac{3}{2}} \left(\frac{x_0 + h}{2} + \frac{y_0 + K_2}{2} \right)$ $K_4 = h^{\frac{3}{2}} \left(\frac{x_0 + h}{2} + \frac{y_0 + K_2}{2} \right)$	
		2/2.05	×
		- 0.1f (0.05 , 0.9526) - 0.1f (0.05 ,	1
		= 0.1 (0.052 - 0.9526)	1
		= 0.1 (0.05	1
		K3 = -0.0950	1
-	(1.6)	$K_{4} = hf(x_{0} + h, y_{0} + K_{3})$ $1 - 0.0950$	-
		$= 0.1 \pm (0.1, 0.9050)$ $= 0.1 \pm (0.1, 0.9050)$	
		$= 0.17 (0.1^{2} - 0.9050)$	
		ky = -0.0895	
		K = K, + 2K2 + 2K3 + K4	
mu_		= -0.1 + 2 (+0.0948) -(0.0950) 2 + -0.0895	
		6	
		= - 0.0949	
182		Y, = Y0 + K	
		= 1 - 0.0949	
1		4, = 0.9052	
1-0-		1940 310-	
1			

classon	
Classanate Page	clasemate Date
2	To frad: - y(1.2) 9, = 0.1 , y, = 0.9052 , h= 0.1.
	k = hf (x, y,) =
	$k_2 = hf\left(\frac{x_1 + h}{2}, y_1 + \frac{k_1}{2}\right)$
	$k_3 = h \neq \left(x_1 + \frac{h}{2}, y_1 + \frac{k_2}{2} \right)$
	=
OT I	
.0895	$k_{4} = hf \left(x_{1} + h \right) $
	$K = K_1 + 2k_2 + 2k_3 + 2k_4$





$\frac{dy}{dx} = f(\alpha, y)$ $= \frac{1}{2} \frac{dy}{dx} = \frac{1}{2} $
$y_{1} = y_{1} + h + (x_{1}, y_{1})$ $y_{1} = y_{1} + h + (x_{0}, y_{0}) = 1 + (0.1) + (0.1)$ $y_{1} = y_{0} + h + (x_{0}, y_{0}) = 1 + (0.1) + (0.1)$ $y_{2} = y_{1} + h + (x_{0}, y_{0})$ $y_{3} = y_{1} + h + (x_{0}, y_{0})$ $y_{4} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{5} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{7} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{8} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{9} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{1} = y_{0} + y_{0} + (x_{0}, y_{0})$ $y_{2} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{3} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{4} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{5} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{6} = y_{1} + y_{0} + (x_{0}, y_{0})$ $y_{7} = y_{7} + y_{7} + y_{7} + (x_{7}, y_{7})$ $y_{7} = y_{7} + y_{7} + y_{7} + (x_{7}, y_{7})$ $y_{7} = y_{7} + y_{7} + y_{7} + (x_{7}, y_{7})$ $y_{7} = y_{7} + (x_{7}, y_{7})$
$y_{1} = y_{1} + hf(x_{1}, y_{1})$ $y_{2} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1)$ $y_{3} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1) = 1.1$ $y_{4} = y_{1} + hf(x_{0}, y_{0})$ $y_{5} = y_{1} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$
$y_{1} = y_{1} + hf(x_{1}, y_{1})$ $y_{2} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1)$ $y_{3} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1) = 1.1$ $y_{4} = y_{1} + hf(x_{0}, y_{0})$ $y_{5} = y_{1} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$
$y_{1} = y_{1} + hf(x_{1}, y_{1})$ $y_{2} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1)$ $y_{3} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(1+(0)(1)) = 1.1$ $y_{4} = y_{1} + hf(x_{0}, y_{0})$ $y_{5} = y_{1} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$
$y_{1} = y_{1} + hf(x_{1}, y_{1})$ $y_{2} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0.1)$ $y_{3} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1)f(1+(0)(1)) = 1.1$ $y_{4} = y_{1} + hf(x_{0}, y_{0})$ $y_{5} = y_{1} + hf(x_{0}, y_{0})$ $y_{7} = y_{7} + hf(x_{7}, y_{2})$
$y_{1} = y_{1} + hf(x_{0}, y_{0}) = 1 + (0.1) f(0, 1)$ $y_{1} = y_{0} + hf(x_{0}, y_{0}) = 1 + (0.1) f(0, 1)$ $y_{1} = y_{1} + hf(x_{1}, y_{1})$ $y_{2} = y_{1} + hf(x_{1}, y_{1})$ $y_{3} = y_{1} + hf(x_{1}, y_{1})$ $y_{4} = 1 - 1 + (0 - 1) f(0 - 1) f(0 - 1) f(0 - 1)$ $y_{5} = y_{2} + hf(x_{2}, y_{2})$ $y_{6} = y_{2} + hf(x_{2}, y_{2})$ $y_{7} = y_{2} + hf(x_{2}, y_{2})$ $y_{8} = y_{2} + hf(x_{3}, y_{2})$
$y_{1} = y_{0} + h_{1}f(x_{0}, y_{0}) = 1 + (0.1) f(0, 1)$ $y_{1} = y_{1} + h_{1}f(x_{0}, y_{0}) = 1 + (0.1) f(0)(1) = 1.1$ $y_{2} = y_{1} + h_{1}f(x_{0}, y_{0})$ $y_{3} = y_{1} + h_{1}f(x_{0}, y_{0})$ $y_{4} = 1.1 + (0.1) f(0.1) f(0.1) f(0.1)$ $y_{5} = 1.2210$ $y_{6} = y_{2} + h_{1}f(x_{6}, y_{6})$ $y_{7} = y_{7} + h_{1}f(x_{7}, y_{7})$ $y_{8} = y_{7} + h_{1}f(x_{7}, y_{7})$
$y_{1} = y_{0} + hf(x_{0}, y_{0}) = 1 + (0.1)f(0, 1)$ $y_{2} = y_{1} + hf(x_{0}, y_{0})$ $y_{3} = y_{1} + hf(x_{0}, y_{0})$ $y_{4} = \frac{1}{1 + (0.1)}f(0.1, 1.1)$ $y_{4} = \frac{1}{1 + (0.1)}f(0.1)f(0.1)$ $y_{5} = \frac{1}{1 + (0.1)}f(0.2, 1.221)$
$y_{3} = y_{1} + hf(\alpha_{1}, y_{1})$ $y_{2} = hf(-1) + (0-1) + $
$y_{3} = y_{1} + hf(\alpha_{1}, y_{1})$ $y_{2} = hf(-1) + (0-1) + $
$y_{3} = y_{1} + hf(\alpha_{1}, y_{1})$ $y_{2} = hf(-1) + (0-1) + $
$y_{1} = 1 \cdot 1 + (0 \cdot 1) + (0 \cdot 1$
$y_{1} = 1 \cdot 1 + (0 \cdot 1) + (0 \cdot 1$
$y_{1} = 1 - 1 + (0 - 1) \left(1 - 1 + (0 - 1) + $
$y_3 = y_2 + hf(\alpha_2, y_2)$ $y_3 = y_2 + hf(\alpha_2)f(\alpha_2, y_2)$
$y_3 = y_2 + hf(q_2, y_2)$
$\frac{1}{1} = (1.221) + (0.1) + (0.2 \cdot 1.221)$
33 () () () () () () ()
$y_3 = (1-221) + (0.1) [(1.221) + (0.2)(1.221)]$
y = 1.3675
$y_4 = y_3 + hf(x_3, y_3)$ $y_5 = (1,2675) + (0,1)f(0.63) + (3.675)$
34 - (13513) ((0.1))
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
93 = 44 + hf (x4, y4)
Y== (1-5453) + (0.1) f (0.4 1-5453)
Ys = (1.5453) + (0.1) (0.1) (0.4) (1.5453) + (0.4) (1.5453)
195 = 1.07616]
1.24(0.6) = 1.3611)
[.:y(0.5) = 1.7616]

classaute	1	
ote	1	
		elizable () total
	(0)	No.
	14	Step tize 0.2 to estimate y(1), given y'=1-ny;
	1	
	=	91,=0.2 y,=0.2
		N1 - 0-4 Y2 - 0-392
		43 = 0.6 93 = 0.5606
		Nu = 0.8 Yu = 0.6934
		Ns= 1 Ys= 0.7824
(F) 12		The same way
	I	C
		Euler's Modified Method :-
16		lieun: - dy = f(x,y); y(x)=yo
		dr dr
		Maria and a second a second and
		Predictor 2-(P):
		connector: (c):
		yn = yn-1 + h ((n-1, yn-1) + f(an, yn)
-	0 6 (1)	Step size 0.1 to find y (0.2) green dy = y - 22 -
-		
	(7M)	y(0)=1;
	_	1 2 4 51 · h=0.1
-	=>	Circum: - 910 = 0
		Cuture :- $910=0$; $y_0=1$; $h=0.1$ $f(\alpha,y)=y=2i$
		E210-1 2 W
		To tind: y(0.2) with step size 0.1
		To find: y(0.2) with sip size
1		[9, = 0.2], [y, = ?]
		1 () 2 () 1 () 2 · 3

