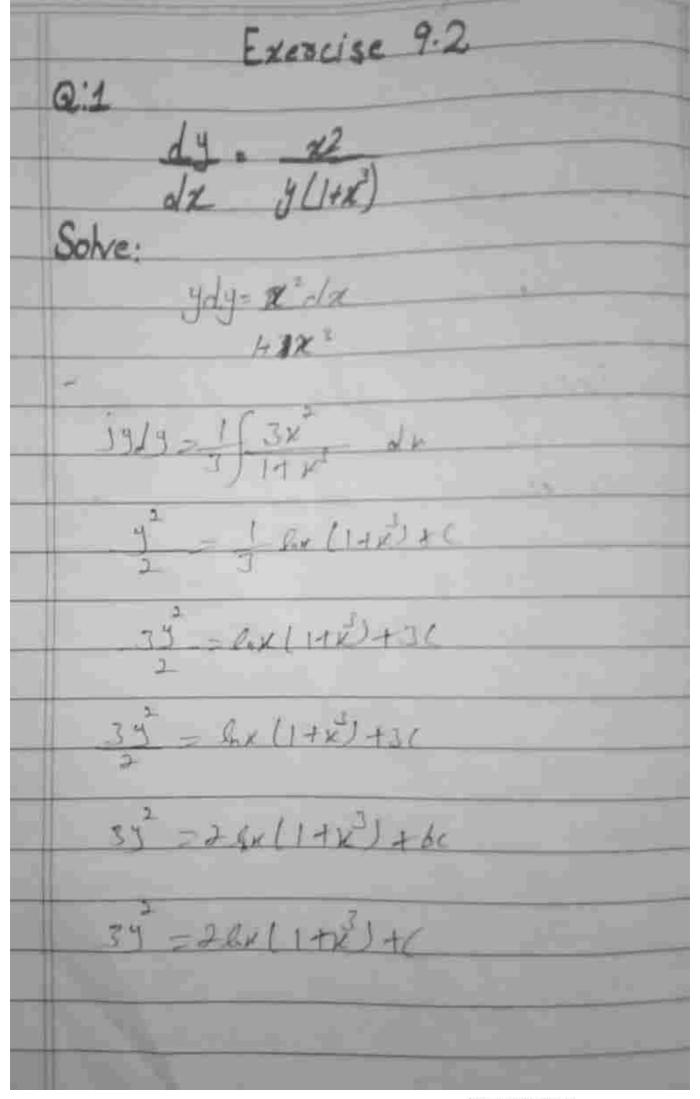
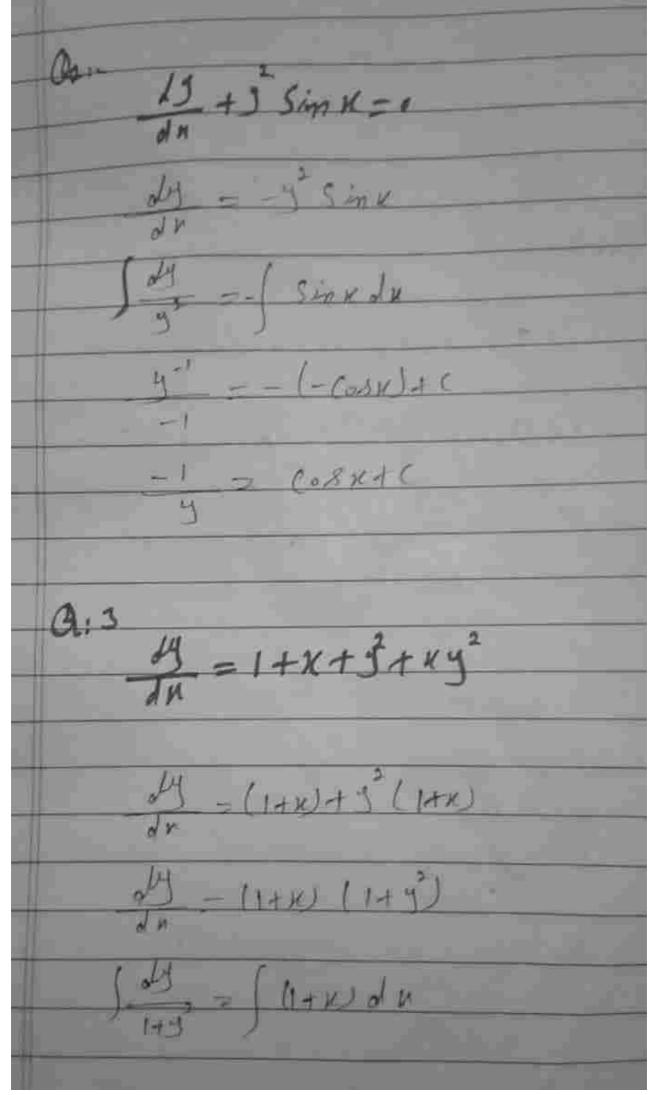
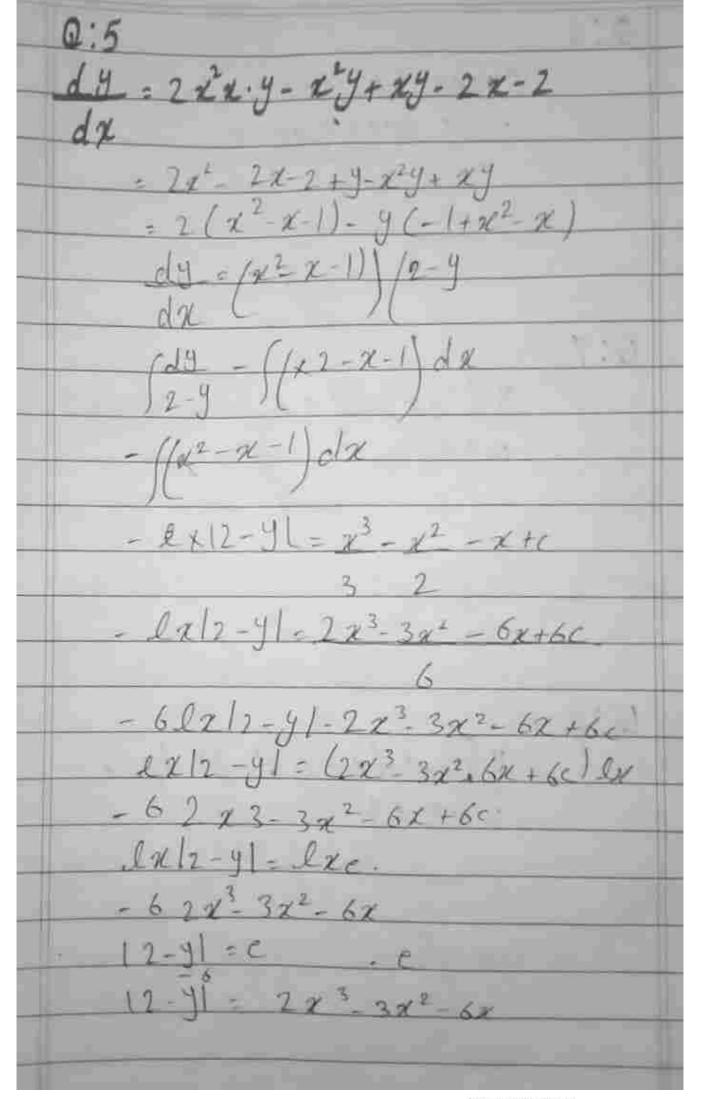
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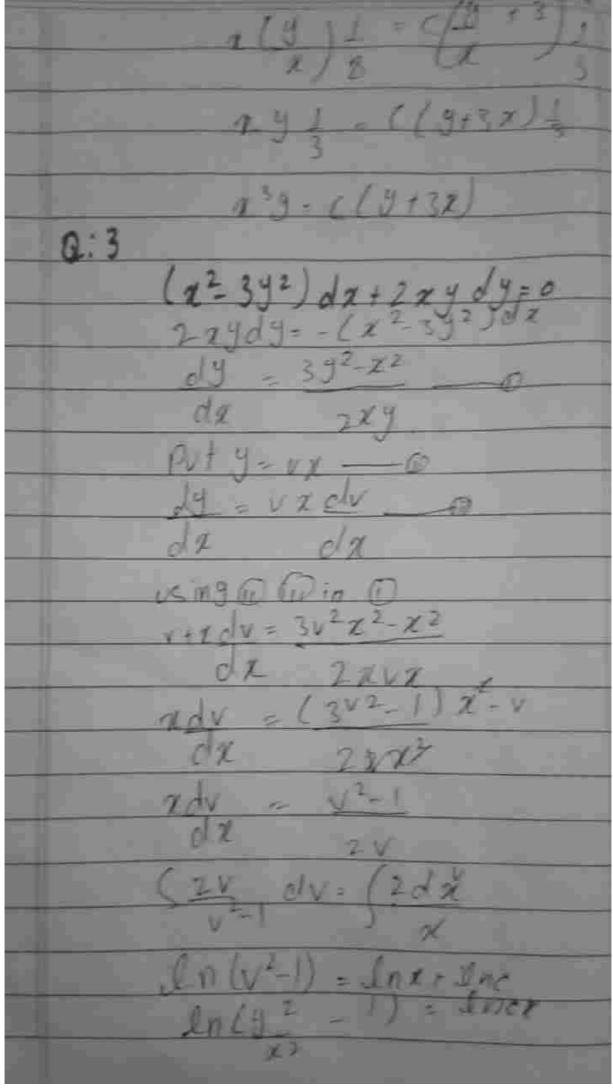
Ini'y = x + x + C 2 ton 9 - 2x + x 1 C (Ky+2x+y+2)dx+(x2+2x)dy=0 [K()+2)+()+2)]dK+K(X+2)dy=0 (9+2) (x+1) dx +x (x+2) 1=0 - 69 x (x+2) (4+2) X+1 dx + 5 dy 2 4+2 1 (2x+2dx+ (dy = 0 2)1+22)9+2 ex(y+2) = 1 (a (x2+2x)+ ex J22+22



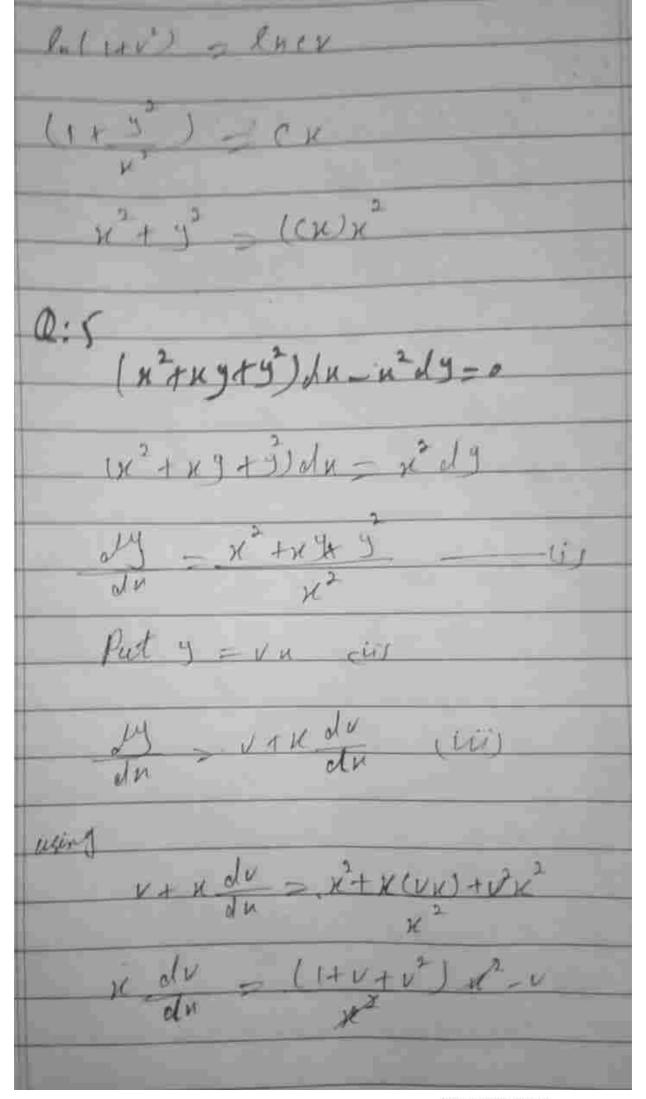
@:6 Cosey dz + secxdy = 0 - by cosey secz 1 dx + d9 = 0 Stex cosecy => Scoszdz + Ssiydy = Sodz => Sinx - Cosy = C Q:7 9 (1+x)dx+x (1+y)dy:0 +64 x4 (1+x) dx + (1+y) dy = 0 S(1 +1) dx+S(4,+1) dy = Sodx -> Qx + xy + 9 x+4+1x(xy)=(0:8 4 11+x2 dx+x 11+42 dy, 0 ÷ by 29 SII+x2/x+ SI+92 dy. Godz PUT /1+x2=+ PUT /1+42 2 2 xdx = 2+d+ 2 ydy = 22dz ad2+d+ 9d4=20

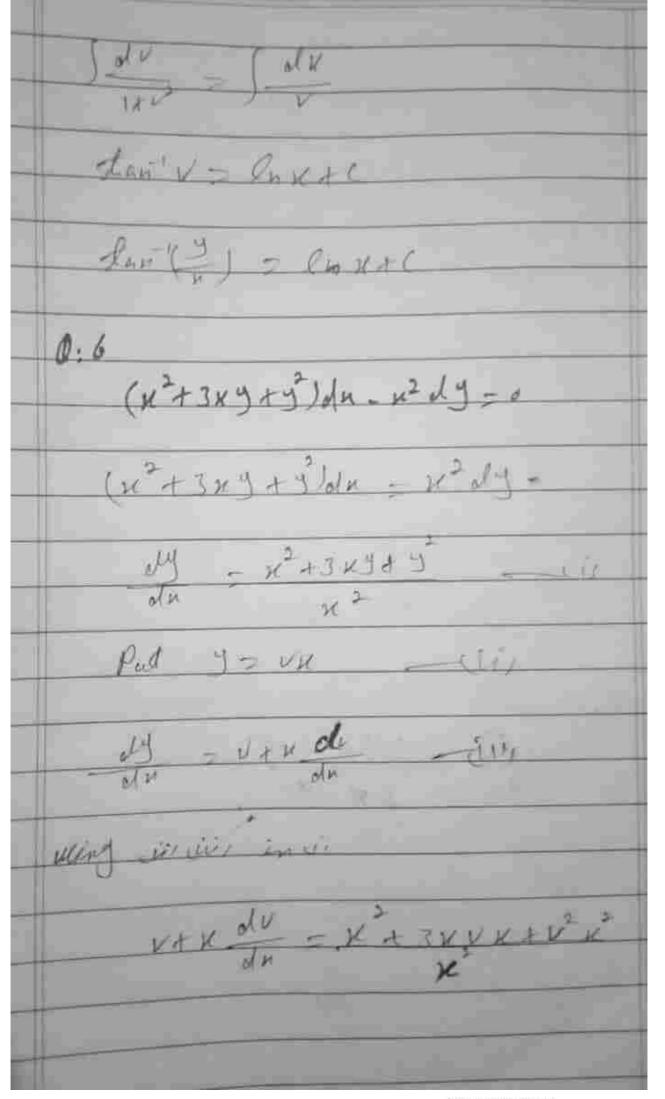
Therefore Nomogenious equation x - y) dx - (x + y) dy = 0

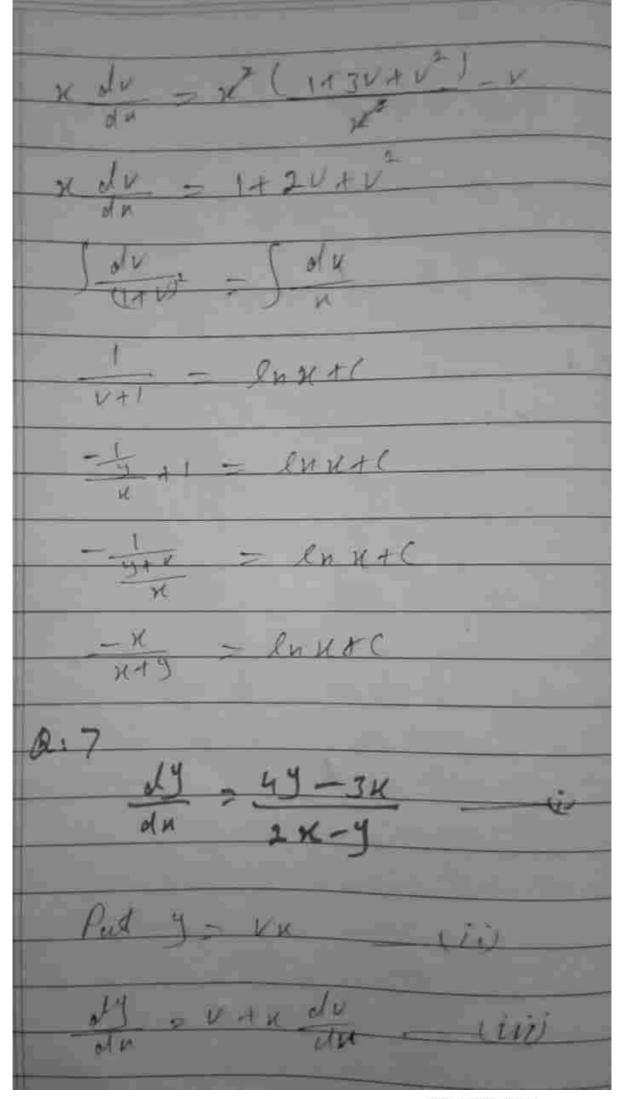
V+Idv+/el (2 vdv (dv - Cdx 1 lx(V2+1) + tan 1 - 1+c) = + tan'v + 1 z = c 1 1 592+ x2 - 2x /x2 -len 1/9 12/42+ 22 + for (4)=c Q:2 dx + x2d9 =0

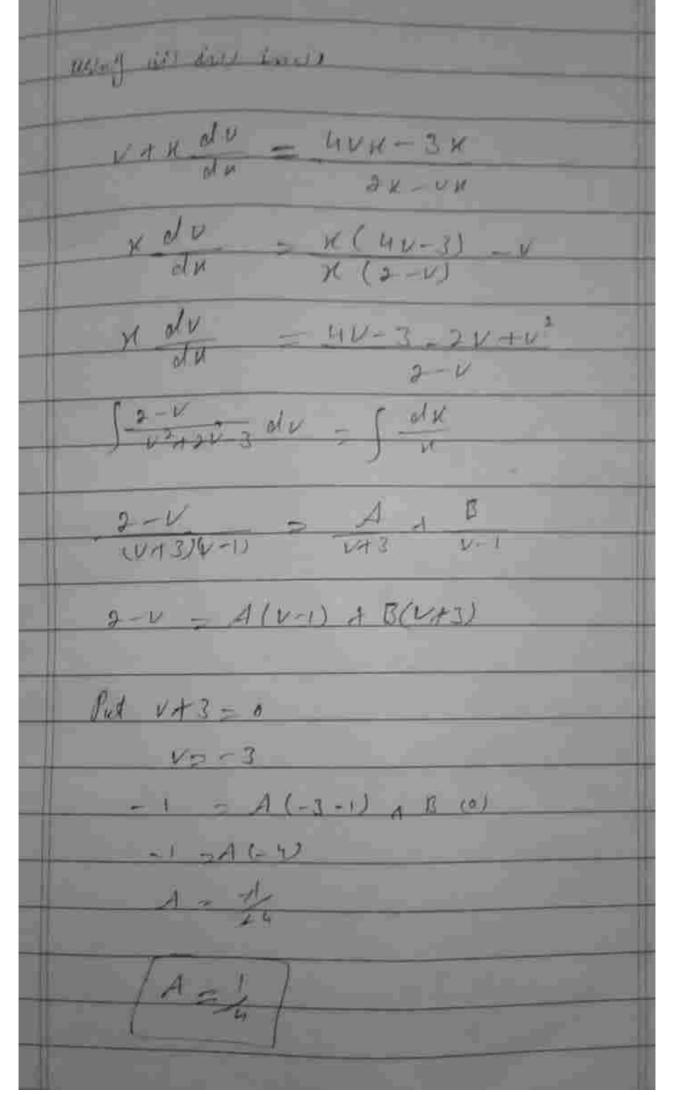


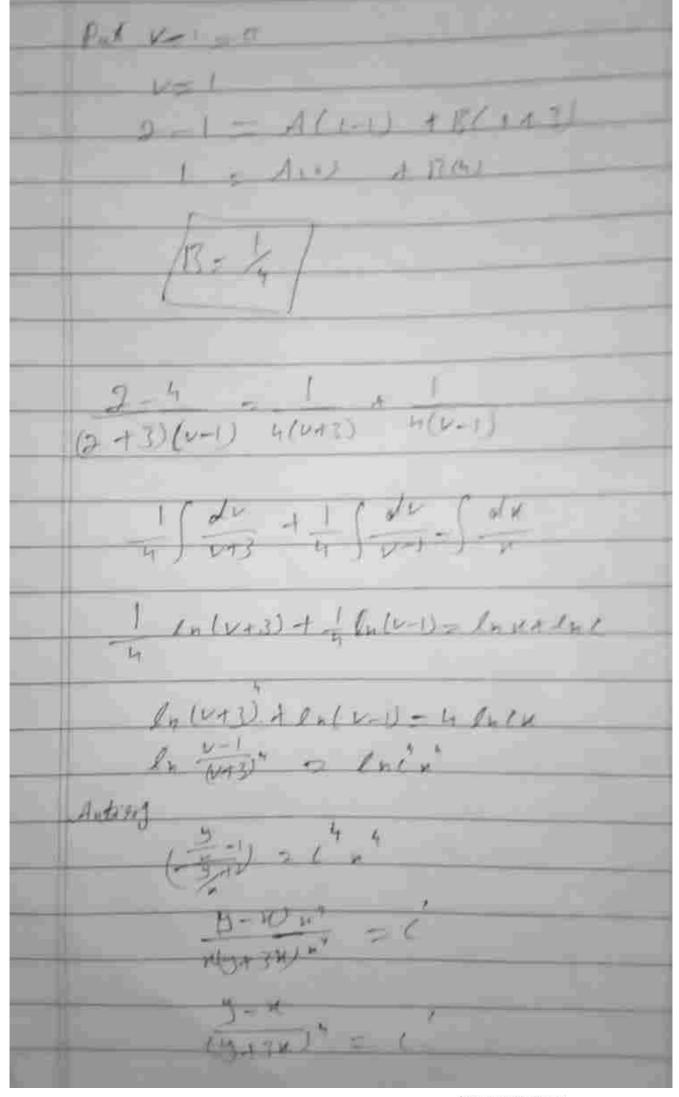
4/2- 1/2 - 02 Q:4 (x2+342)dx-2x ydy-0 (721392)dx-229dy 72+392 - 09 Pot 9 - VX dy = v+2ds littly (int in (). VINDE - XTIVE = x (1+3v) In (1+ v2) - en x 2 1 mc

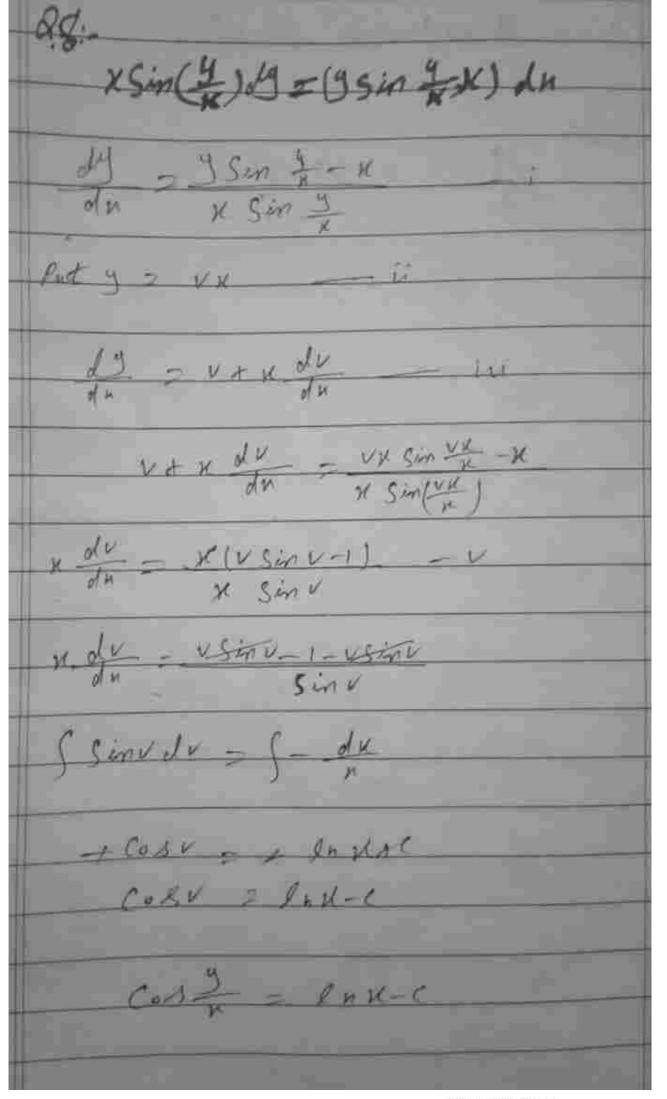




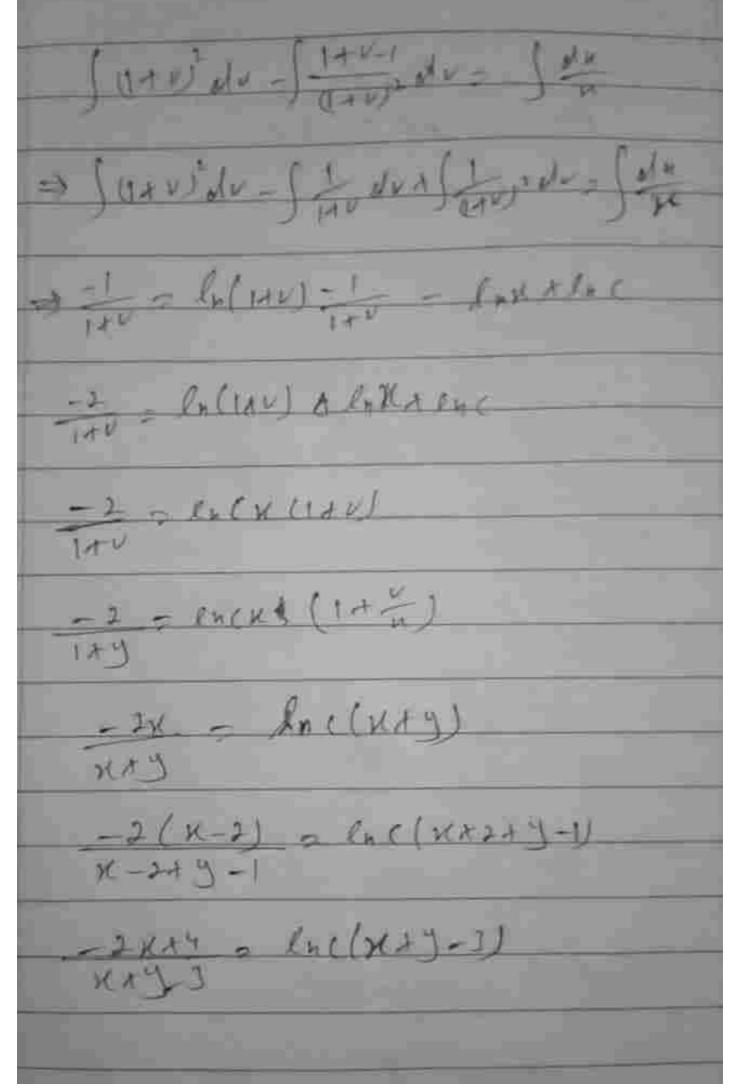




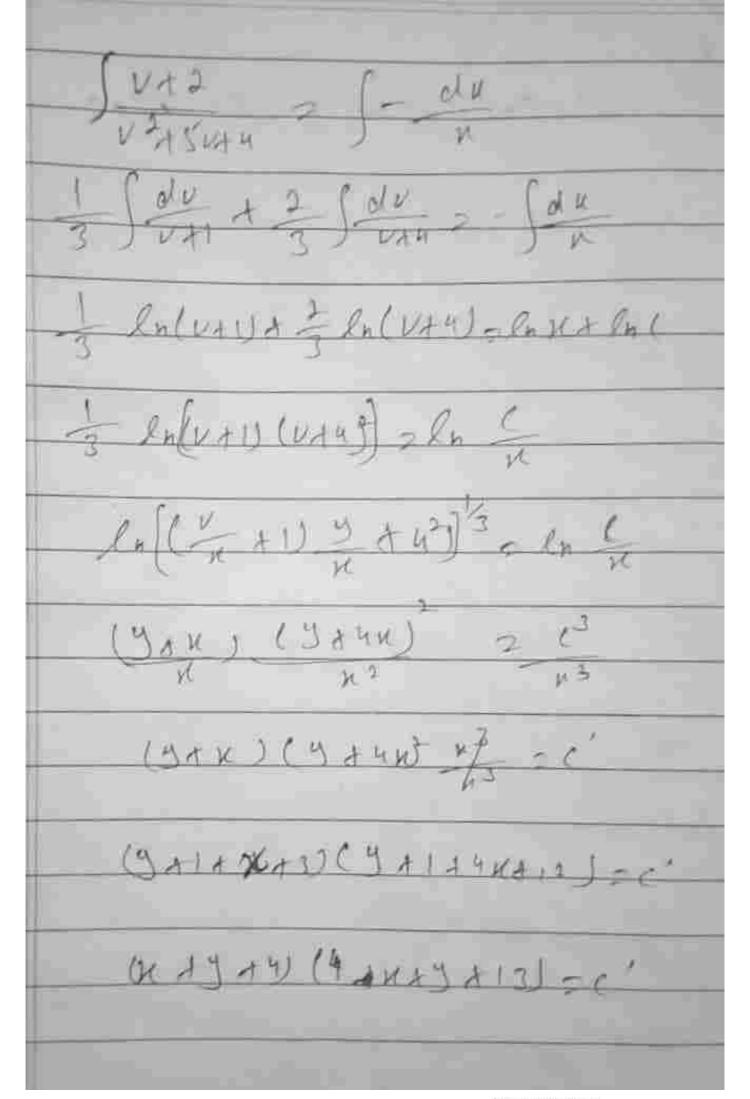




Non Homogenious Equation 0.1: - XX39-5 96-9-1 Pook H - Kth du xxx-19xx5-1 19 90 3 VIE dy 2 V + x dv V+X du = X+3VV x dv = x (1+3v) xdv = (1-v)2 SI-Vades Solk (1 dv = - [vdv =] dn



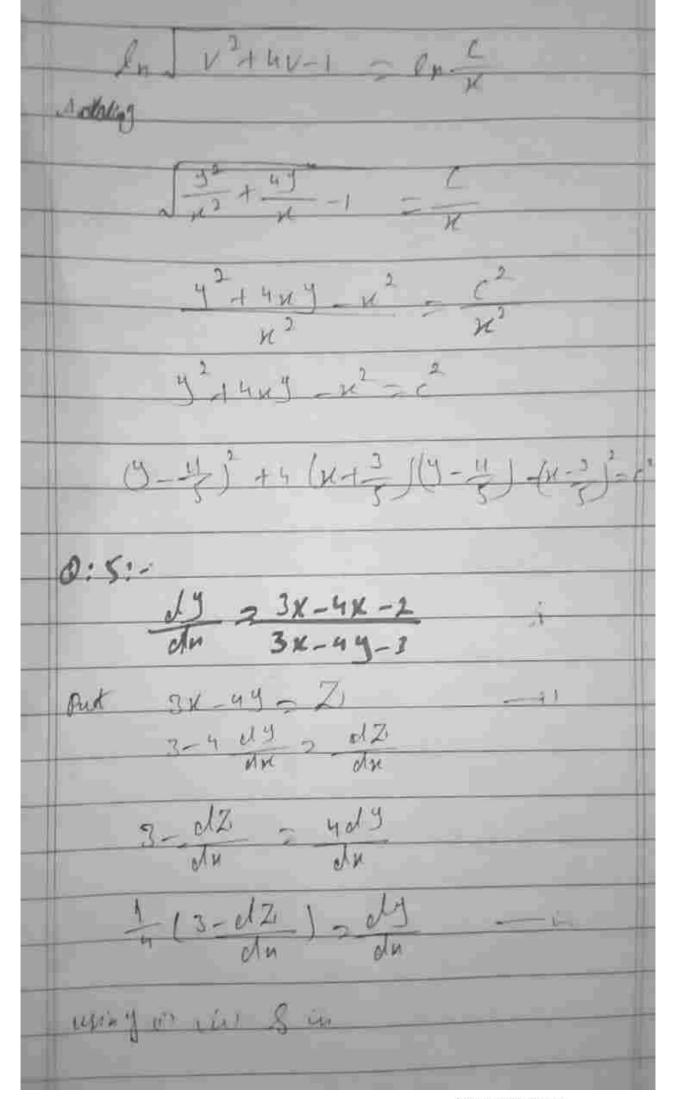
0:2:-NH = - (4×+37+10) Put x - xxh 9 - JAK 019 = - (4) X + 4 h + 3 3 A 3 K A (5) OKAZA AJOKAT Mn 2 2 KA 7 Pat your dy = VAXdv FLI VXX du = - UX - JUX Ndv = - 18 (4+3V) 0 2-4-32-20-02 x du = = (v2+5v+4)

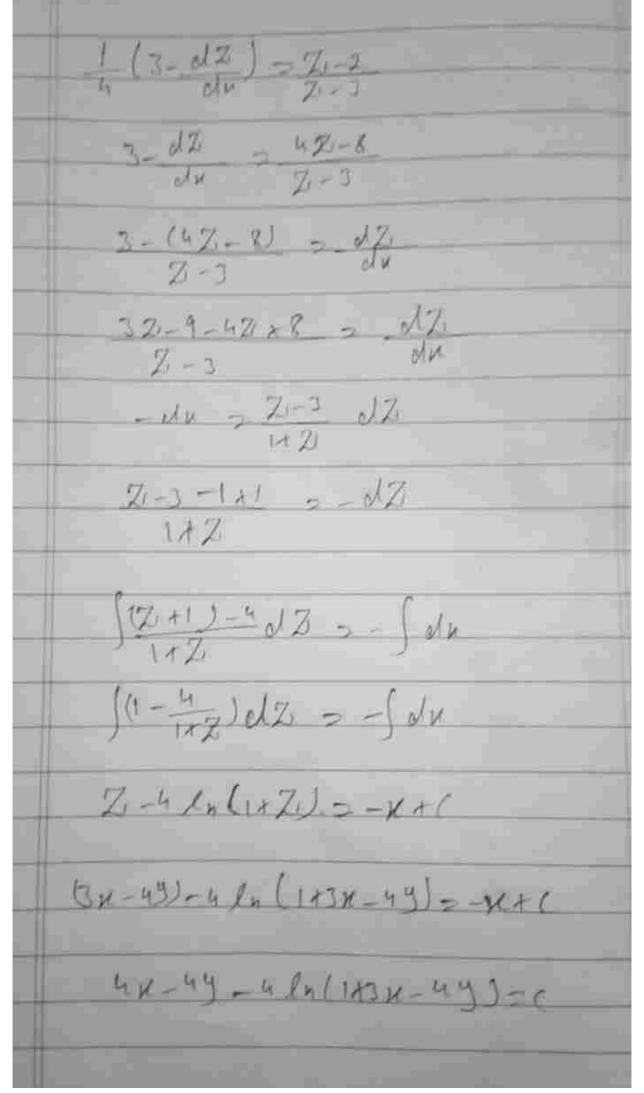


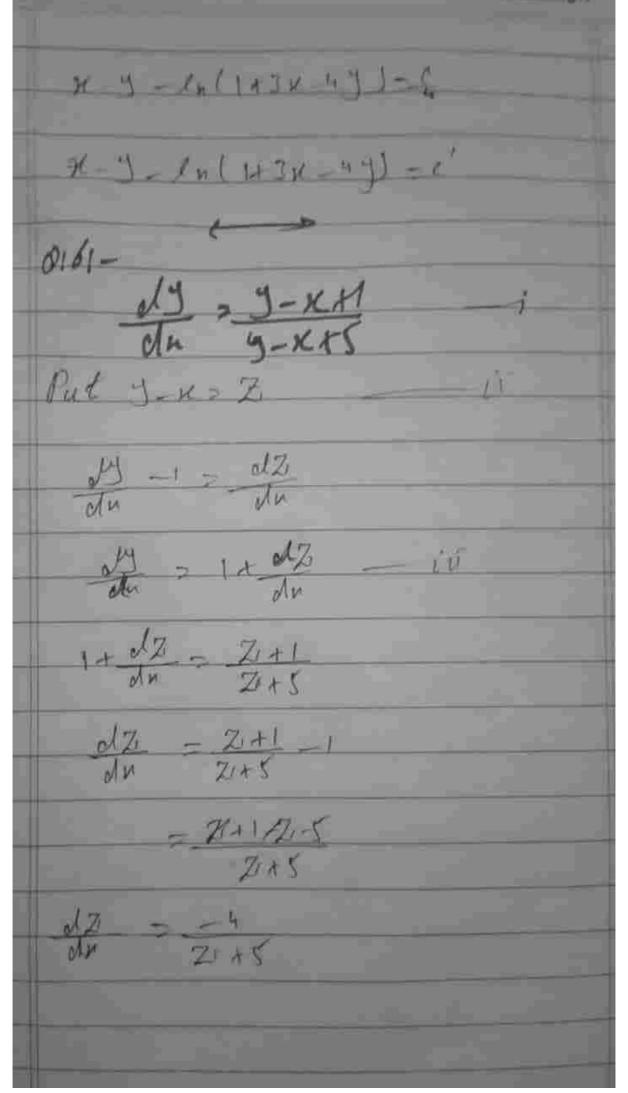
Q:3: -135-7x-3/du+(74-2x-7)xy=0 (77-34-2)dt =- (39-7K-2)da dy = -39+7KA3 Part us Noth y - 31/2 NU = 3(3+K)+7(K+h)+3 NU 7(9+K) -3(K+h)-7 14 2 - 34+7K Put your ___ ij dy = vd xd" in WAX du = -3VX+74 Xdu = X(-3v+7) - v x dv = - 2V47 - 7 V2420

170-1 du = (du ... 2 Salv 5 Colv = Colx -2 proli-v) - Ston (1+V) = 1 mx 2 ln c - 12 (1-7) (117) = There Inx (x-3) (xx3) = 1,2,7 (x-J) (x+1) = 17x7 -x- = (x-y)2 (xx y)3 1 = (x - 9) (xx4)5 C'=(N-(9-1)) (NH9-1) " = X - (4-1)" 1 = (x - 9 + 1) (x+4-1)5

19:41-X-145 2X+5-1 Put Ka Kath JOJAK dy = xxh-29-218x5 2x+2h+ 3+19-1 dr - x-24 Put y - 17 Jy - VXX dv in NAKON - X-JUK 31 du = x(x-2v) -v 21 dv -1-2U-2V-V2 1-41-12 dv 2- 5 dx 1 ln (v2,40-1) = lnxxlnc



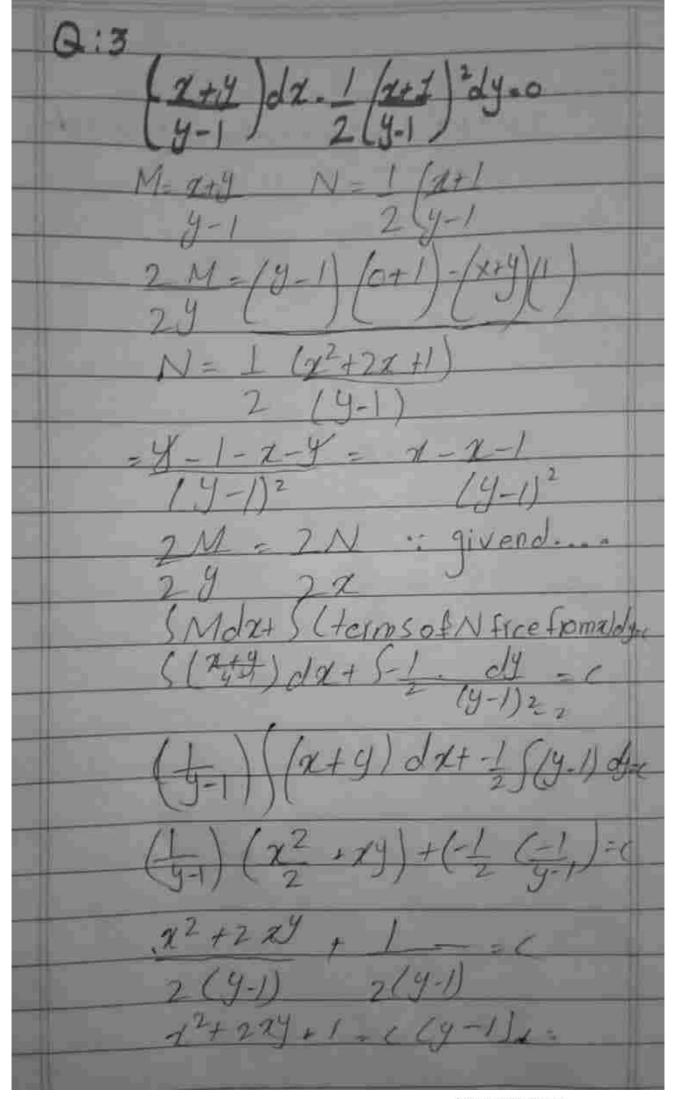




2145) 22 = -4 (dx 212 157 = 4xxx Z= x 10 Z - - 4 K x 6 71 + 1071 = - 8HAZIC 19-W + 10(4-K) = -8KAC (y-10) + 10 (y-1) ++8x-c" (1-W2 +104 -10K +8K=1" (9-K)2 + 109 -2K == "

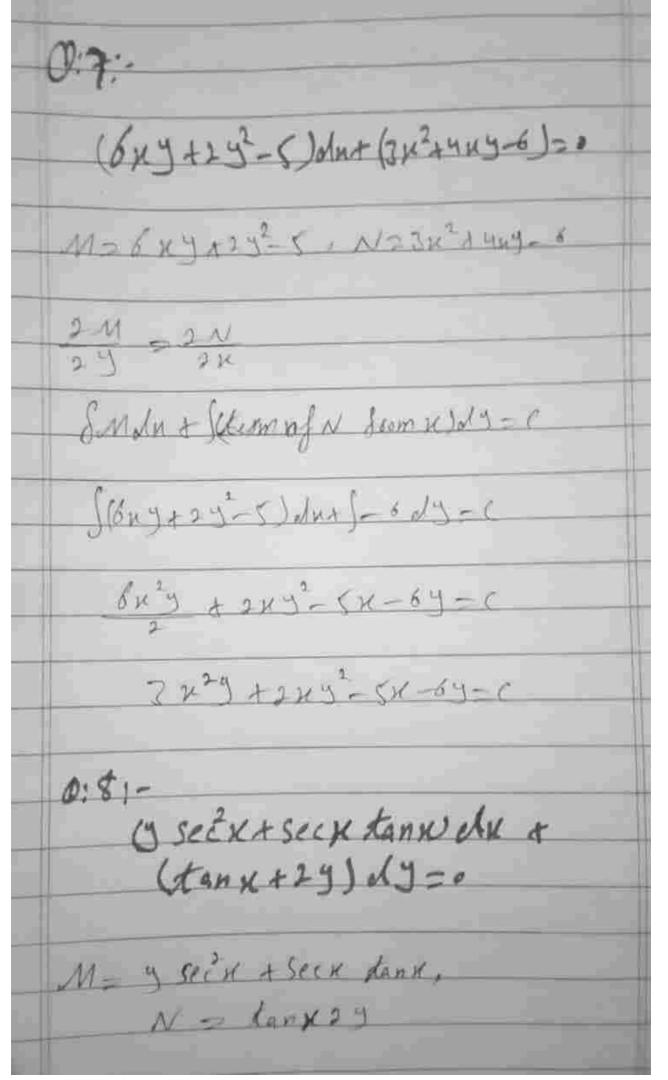
Exercise 9.4 Exact Equation (3x+444)du+6x2+24)dy=1 M - 3x+ 4x4, N-22+27 2 9 = 0 + 4 x - 4 x + 0 2M - 2N NOW SMale & Column of N Some 124-1 S(3x2+4xy)dx+ (29d9-c 3 x + 4x y + 2 y - C x312x24 + 42=C

(2xy+y tany)dux (n2-x dang + secty) dy = o -2x- Kan') (Moln + (demos) N from w) dy - 8 [2x9+4-danydx + Secondy= 2x2 1 +x9 - x tony + tong - c x2y dxy -x dong + dong = c



2:4 dy = - (az+by) (hatby)dy = - (gzthy)dx (ax + hy) dx + (h) + by)dy . o M-ax thy N=hn +by ax+ by dx+ byolyax2 + 6ny + by 2 2 4 x2 + 2h x4 + 6y2=C 0:5 SMAXISCHEMS of N face from HINNY) oln+SI.dy = Sdougs Insy doct Sdy C

lnxy - Saxty = C HARING - XIJ = C 1-269724242 2N - 11-285436(2249) 24 2x SMdr4S(+coms of N,x)dy 449) A24 Nil= 14 + 42-123 = C. Ac.



2-M - 2N Secr 2-N - Secr 24 2 X I Molut Steam of No Jely-c Jy secret secretary dua (29 dy-c I dan u & secuty =

Exercise # 9.5 QHI Solve (xy2+y) dx-xdy=0 My=224+1 N2=-1 (21 +4,) dx - 7 dy - 0-00 NOW M - x +4 N= 192 SMdy+SL Terms ofN 5 (21 ty) d2+ Nil-c

1 - 2 ln 2 / n = 3 ul tiply both sides 505 Modat Stoum of Nfre (1+1/2 - 1/2) c/x+Nil=c A + Onrig. M-1 NX 29 Myf NX is Nopezaetd, Hear

=> 1e29- My se 0#4 dy+ (y-sinz) dx= M= 4-Sinz N=1 NO 8

ady + x (y Sinx) du=0 M=y-Siml Nyl My = Nx: Ois Bact S(y-Sind) dat = C 219+COSX=C .. My = Not: Dis Fast INdate (cteoms of of 2)dy-c S(cy+2,)dx+12ydy-c 24+2x+2y2=C 24 24 24+22+4-c (22 42 20)dx+2ydy=0-0 M=747972X N=24 My - 24 Nx = 0 My INX . is Non. NX - My = 0 - 2y $M = x_+^2 y_+^2 2y$ My-Nx = 24-0 Multibly both Side ex/ 1/4 2x) dx+ ex(2y) dy=0-0

M= (2/1/21) N= 82) My=exzy NX=Exzy My = NX : DIS SE(2+9+221) elx+Nil=C Sexelx+Sextdx+Sexxdn=C HER STREEDHIER JASENTHOLEC (7497)enzc Q.6 <42+34 dx+2xydy-0-0 M= 42+3y= N=2xy My = 0+64 NX-29 My XNX NX-My = 24-64 M 421+342 My-NH -69-29 - 49 - 2 N 224 224 2 Multibly both sides (4243422)dx+(2934)dy=0-@ My= 69 x2 Nx=6x29 5 (42 + 3432) oly + Nil-C 4 x2 + 842 - C 24 72 - C AZ

Q:87 (x14) dx 2xyoly=0-0 Multiply bothsides (x2+y2)dx-1 (729)dy-0 1+92722-29 019-0 19=29 Nx=+29 1y = 8x+4-1

