	DATE / /
	Week 3 assignment
	Himansho Shete (23B0770)
JAH.	our nous in short some is the
0,1	to to the Rows and now silve
00000	· NO pure NE
	B-33 3 " Mixed NE:
	Game 1 (zero sum) (ch, Row: (P, 1-P),
-	the Column : (q,1-2)
(1/2)	Solve for in difference:
12 901	Row i had his - ill little
(Ca) 37	10 T: -19 -4(1-2) = -19 - 9+49 = 39-4
5	· B: -39 + 3 (1-9) = -39 +3 -39 = (-69+3)
in the Office of the Control of the	
5	Set equal: 39-4=-69+3 3/9=7
	Colomn: 2021
	· L: -1P-3(1-P) = -1P-3+3P= (2P-3)
	- R = -4P+3(1-P) = -4P+3-3P= (-7P+3)
	$32P-3=-7P+3$ $3)$ $P=6g=\frac{2}{3}$
3.11	value of the hame
	= Expected payoff using (2/3, 1/3) and (7/9, 2/4)
6	2(号)(号)(一)+(号)(号)(一)+(号)(号)(一分)
	$r\left(\frac{1}{3}\right)\left(\frac{2}{3}\right)\left(\frac{3}{3}\right)' = -\frac{2}{3}$
	3 value =-2

·
have 2 (zem sum) 1 5 popure NE 1
- Mixed NE:
T 3 7 2 using indifference method
B -3 8/1 5 - 2) Row: (5/9, (49)
18 18/
3 (Non-zero Jum) = value = 1.11
College Ray : ex + a ye = (ye) (: 200)
5,16 15,8 . (T, L): (5,16) - Row prefos B
16,7 (B,R): (8,15) - Row prefore T
· (B, L): NE (16,7)
mixed NE needed (TIR): NE (#15/8)
since 2 pure NE exist) Pure NE: (B,L) & (T,R)
$(P_{0-1}) - D_{0} = P_{0}$
4 (Mon Zero sum)
1 18 Mills and 18 mills Plant
10,3 15,10 · column prefers R in both cases
15,3 15,10 · Column preters R in both cases 15,4 15,7 · Any strategy for Row, Column plays F NE: (Any of Tor B, R)
NG: (Any of Tor B.R)
(10) a conduction (2)
o let n=PI plays strategy 1
7 = 1P2 playe; Street-egg & I
Company of the compan
discoupled to conscient thousand the grand (b)

			Tho			
a) v(x	y) = 5 my - 2x+6y-2	(b) U1 = 32	xy-4x.	ts,		
	1 And Box 11 o		1940	x-8y+12		
	a zero sum	x=1 = 411	=1	4=0		
(8)	De nongin					
13	y=1 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	x=0 5,1	1	5,12		
	11 1 m 01/20 (5					
2 =0	and the second s	(and the				
Check	: U(x,y) = xy5+	500 + Ae+ cou	Start -2	-> Matches		
1	- (5/2):(11).	3,71	61	3		
0,3	let P= probability of	C (clean)	F,21	<u>9</u>		
	(f, db) 3 m : (1, d).					
(a)	Expected payoff:	Jean : 10-	2 = 9	Min the		
(8,1)	(1 8) : 91 9 9 " Not clean : 10 x (1-C1-p) =3)					
3	9 = 10(1-(1-p)9)					
	\rightarrow $(1-P)^3 = 0.1$	(mad anos	1001	A 2400		
boadfil	== P=(1-(0.1), = 0.244					
in the second se	9			Take of the same o		
peroly (b) who	heneralize: (1-P) Cn	-1)=0.1:7	P= 1-	(0.1) (n-1)		
	(And is I so But)		•			
(v)	Chult on p-00 3 ((-p) n - p (.	-np)			
	· I	£ p→0,		ds to 1		
		1 - 1 - 1 - 1 - 1 - 1 - 1				
				0 -01 -01		
(d)	Name of the effect:	Diffusion of	l Respo	nsibility,		
			-,	V *		

	tion in the Marian
Q.4)	(a) pure strategy : Subsets of numbers & 1,2, K}
	o Payoft:
	If player wins: 1-M - cost
	. DEA Mobile 18 = cost 5
	If no unique winner: - cast
	· ARARD 1000 0080
(b)	Frame is finite & mixed strategies allowed
	of Nash Existance Theorem of Symmetric NE Boists
	Granton C) Attack A : Day A .
(c)	Every player chooses I with prob p.
	winning prob. = PI (1-PI) 1-1
१०००० वे अ	Expected payoff to= [mx p, (1-p,) n-1]-p,
	NE a payoff = 0:
	19 to 20 20 20 20 20 20 20 20 20 20 20 20 20
(d)	If prob 20 for "no purchase"
this and	one of payoff > 0 on bound (
	But payoff = 0 in NE => any partire payoff would
De di	incentivize buying of 80, expected payoff =0.
	e) we rescalled day the trio yes yes street
	Total expected value < n x 2 & some must not buy.
	- Not purchasing must be past of equilibrium
	- Then expected payoff = 0 for all in symmetric NB.
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	- Milliamor off most plant i
	in Similar the one of mil of