1. Consider a zone with the following character	ulytics:
Household type No. Income (\$/more	S) Zufoultants Trips/day
0 (013 180 (1000	4 6
1 cass 80 18000	4 8
Zormore cons 40 50000	6 11
Due to a decrease in import duties and an act	and income increase of 30 %, At is emperted than 50%
of households without a con will arguire one	in three years. Testimate how many trips the zone
would governtle in that case.	
Solution: X1 = House hold type 7	
X2 = Zneome (A\$/month)	4= 7.7545 + 0.3574 X1 + 0.0001173 X2-0.5560 X3
X3= Inhabitants	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
J= Trips / day	h. )
Howehold type (XI) No. Zacos	ne (\$/mores) (XI) Inhabitary (X3) Trips / day
0 cons 90 570	so 4 6.14
1005 170 234	900 ¢ 8.63
Zormore cars 40 650	00 6 12.76
Sum = 6.14 × 90 + 3.63 × 170 + 12.7	16x (10 (trips) = 2530 (trips)
The second second	
Fig. at the State	The state of the s
2. A small study area has been divided into four	zones and a limited survey has resulted in the
tallowing trip matrix:	
1 2 3 4	of a second
1 - 60 275 571	and the second of the second o
2 50 - 410 443	
3 123 61 - 47	
4 205 265 75 -	
Estimates for future total trip ands for e	och zone are as given below:
a zones Estimated future unights	b Zones Estimarted future destinations
1 1200	1 670
2 /030	2 730
3 3%	3 950
Ψ 770	4 . 995

Colution:													,
	1	2	3	Y	a .L	12.00			1	70	3		1 199
1	-	60	275	<b>5</b> 71	905	1200		1	-	79	360	,	
2	50	_	410	443	903	1050	=)	2	58		47		15 let
3	123	61	_	47	23]	380	=>	3	202	100			7 37
4	205	265	75		585	770		4	290	374		7 12	— 77 100
	378	386	760	106	1585				200	723	79	47 13	48
												<i>V</i>	
	1	2	3	¥					2		3	۲2 L	902
1	_	60	275	171	906		1	-	113		44	班	_
2	70	-	410	443	903		2	89			-13	415	101/
3	123	61	_	47	231	=)	3	218	115			44	377
¥	205	265	75	_	45		Y	363	50		94	-	958
	378	386	760	1061	282			670	729		[2]	994	
	670	730	950	995									
3. Consider	the following	nustry thip	distributi	on/modal	–spl+ m	odel: Vij	n=Ai	Or Bj Dj	expl-B,	Μij <sup>*</sup> ),	when	ie .	4
Mij = -  auess -  If the  and he	the following to cour, kind runs for the cour, kind runs for the cours of the course o	lug Ek ex I stands - or of the stands -	distributi  ip(-T"(  for car  rips between	on/modal  in/ and  and k=Z  een zones	I n=1 s for put i and j the mode	fands for Us transf is Vij=1 1. The ex	person.  ovo, c  timated	s with	how ma	wy wil	n=2, 11 we e fou	persons: can ud to	
Mij = -  access -  If the  and ha  T'=010	the folking the folking to cur, kind russ to the folking processing the triangular to the folking the	hwing thip lug Ek ex I stands - Inber of tublic transfi	distributi  ip(-T"(  for car  rips between	on/modal  in/ and  and k=Z  een zones	I n=1 s for put i and j the mode	lands for like transp is Vijel	person.  ovo, c  timated	s with	how ma	wy wil	n=2, 11 we e fou	persons: can ud to	
Mij = -  cuess -  If the  and ha  T'=01;  Cij'=30	the following to cour, king to the following parties on many parties on the court of the court o	lug E <sub>k</sub> ex I stands - where of the stands - onal \$=0.	distributions of Car for car rips between the account accounts only only	on/modal  is and k=2  een zones  rung to  o, for to	for put i and j the mode ips because	fands for blic transp is Vijel 1. The es	person, and .	ompute potam model	how ma	o car, wy wil	n=2, Il use e fou	persons: can ud to	
Mij = -  access -  If the  and ha  T'=010	the following for the cour, kind to cour, kind the cour, kind the course of the course	log Ex explosed by the stands of the stands of the stands on the stands on the stands on the stands of the stands	distributions  ip(-T" (  for car  rips between account	on/modal is and k=2 een zones reling to -0.04 Mi	I n=1 s for pu i and j the mode the mode	fands for transposition $V_{ij} = 0$ Mij = 0  Mij = -0	person.  2010, c  timated  j the	ompute  potam  model  lug(e-	how mo eter values where $\frac{3}{4}e^{-4}$ :	wy will ues wer ere cal	n=2, Il use e fou lowled	persons: can ud to	
Mij = -  cuess -  If the  and ha  T'=01;  Cij'=30	the following for the cour, $k$ :  total run $t^{2} = 0.05$ and $(ij^{2} = 0.05)$ $t^{2} = 0.05$	lug Ex ex  I stands -	distributii  sp(-T"(  for car  rips between  sort accounts  sort; outs  j Dj exp( j Dj exp(	on/modal  ii) and  iii) and  k=2  een zones  relay to  o, for to  -o.o.y Mij  -o.o.y Mij	for put  i and j  the mode  rips because  i)	fands for transpose $Nij = 0$	person, over the	ornpute  poram  model  lug(e)	how mo ever value $\frac{3}{4} = \frac{4}{4} = \frac{3}{4} = \frac{4}{4}$	o car, with any will use were cal $=-11$ .	n=2, 11 use e fou 1 cularte	persons; can und to d ous;	
Mij = -  cuess -  If the  and ha  T'=01;  Cij'=30	the following for the following properties of the following properties only the following properties of the follow	log Ex ex I stands - where of the cond o	distribution  sp(-T" (  for car  for car  sips between  so, o4; outs  sip Dj exp(-  si	orifmodal  is and k=2  even zones  ruling to  - 0.04 Mij  - 0.04 Mij  49	for put  i and j  the mode  rips because  ')	lands for transfit transfit transfit transfit $V_{ij} = 1$ 1. The escent and $M_{ij}^{ij} = -1$ $M_{ij}^{ij} = -1$ $M_{ij}^{ij} = -1$	person. 1000, c timated  \$\int \tag{1}\left\( 0.05 \right) \\ 1\left\( 0.05 \right) \\ -5949 1.4282	ompute poram model ) log(e- log(e-	how moster values we costs where $\frac{3}{4}e^{-4}$ : $\frac{3}{$	or car, with use were cal $=-11$ .	n=2,  1 use e fou 1 culore  67  91  ( use	persons: can dos;	ke:
Mij = -  cuess -  If the  and ha  T'=01;  Cij'=30	the following for the following properties of the following properties only the following properties of the follow	lug Ex ex  I stands -	distribution  sp(-T" (  for car  for car  sips between  so, o4; outs  sip Dj exp(-  si	orifmodal  is and k=2  even zones  ruling to  - 0.04 Mij  - 0.04 Mij  49	for put  i and j  the mode  rips because  ')	fands for transpose $Nij = 0$	person. 1000, c timated  \$\int \tag{1}\left\( 0.05 \right) \\ 1\left\( 0.05 \right) \\ -5949 1.4282	ompute poram model ) log(e- log(e-	how mo ever value $\frac{3}{4} = \frac{4}{4} = \frac{3}{4} = \frac{4}{4}$	or car, with use were cal $=-11$ .	n=2,  1 use e fou 1 culore  67  91  ( use	persons: can dos;	
Mij = -  cuess -  If the  and ha  T'=01;  Cij'=30	the following for the following properties of the following properties only the following properties of the follow	log Ex ex I stands - where of the cond o	distribution  sp(-T" (  for car  for car  sips between  so, o4; outs  sip Dj exp(-  si	orifmodal  is and k=2  even zones  ruling to  - 0.04 Mij  - 0.04 Mij  49	for put  i and j  the mode  rips because  ')	lands for transfit transfit transfit transfit $V_{ij} = 1$ 1. The escent and $M_{ij}^{ij} = -1$ $M_{ij}^{ij} = -1$ $M_{ij}^{ij} = -1$	person. 1000, c timated  \$\int \tag{1}\left\( 0.05 \right) \\ 1\left\( 0.05 \right) \\ -5949 1.4282	ompute poram model ) log(e- log(e-	how moster values we costs where $\frac{3}{4}e^{-4}$ : $\frac{3}{$	or car, with use were cal $=-11$ .	n=2,  1 use e fou 1 culore  67  91  ( use	persons: can dos;	ke: