Ano1	Maximize Z	= 4n, +3n2 dyl	gient to							
_	(i) 24, +42 < 1000									
	di) m1 tn2 < 800									
	(iii) x, 540	0								
	(iv) x2 5	too N.	n20							
		E year								
	Graphical solution	m:								
	Na.									
	1200	(orner Solution							
	1200	12-1								
	1100	Corner Point	(n, n2)	2						
	Loud									
	9	A	(0,0)	0						
	8.0	ß	(0,700)	2100						
1 :	30 8 6	C	(100, 700)	2500						
	601	D	(200,600)	2600						
	500	E	(400,200)	2200						
	710	F	(400,0)	1600						
	300									
- No.	200									
	100									
1	7/1/	1/22								
-	105 111 A	300 400 300 600 700	100 and 1000 iles	1 14						
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	ma	mum	value					,		70.79
45	Thu	o 71.	= 200	and	м, э	600	is :	the o	phinum	-
	Jak	morte	scoult	mp &	n z	= 26	00 4	s pa	gray hical	solution
- Zuro	DUC		· S	0	3		1	/	0 /	
- P	Simo	lon Me	thal	The	esus	tions	bewr	ne d	m intend	un
ewst.	plank	variab	la as	hllows	1	-	0		m intend	J
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			ci)							
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7			(iri)						•	
			CIV)							
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out	Non-	Busic	variable z-	ج الر	En.	4.3-	2 (0	(0)	0	
ee!	Ma	nimiza	0 2-	Y7, -	3 72	=0	0	7.3	0	
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	Binst/	Iters	from I	initial s	Lund	en Ta	ble 1		ul vis	
[A h	Land of	- 3,000	Tone City	263			Lem	and,	MINAS I	
Basic	2	и,	22	S		2	53	54	Solution	Ratio
2	1	-4	-3	0		0	0	0	0	
51	0	2	1	1		0	0	0	1000	500
S	0	1	- 1	0	2.	1	0	0	800	800
wing Sz	O	G.	0	0	1	0,-	11	0	400	Get
Sy	000	0	ι	1	1	0 -	0	1	700	toolo
	200	1	8	4	100	- 1	- 9	1	9	
	001	Entrin	y Varieb	le	000	Piv	it Eh	ment =	=	L. A.

	Alter	Gau	ss - Joe	lon.	Row C	recation	114	199 31	
Flyst	The second secon							and the same	
Basic	Z		17,	s,	5,			Adu hon	Ratio
2	الم وأن ما	0		0				1600	
S,	0	0	T	1	0	- 2	0	200	200
S	0		1	0	, , ,	1	0	400	400
71	0	1	0	0	0	10 10	000	400	400/0
34	0	0	1	0	0	0	1.	700	700
33	+	+	5 . Te.		1 ,12	+,17:	3.5	icsult.	
) c = S1,	
			Pivot	clem	iont =	1	0	V	
		ont	E ,21	0000		1	1741		
	Alta		u - J.,	Jan	Lous o	runta	~ :		
Second			b 5		2.0	W 1	1/1	shares.	
Basic	2	Α,	Х,	S,	S	S ₃	Sy	Solution	Ra hon
2	1	0	0	3	0	-2	0	2200	
9 N2	0	0	11.	2 19	(0)	- 2	0	200	-100
52	0	0	0.0	1	,17	1 (3)		200	200
7/1	0	1	0	0	. 0	1 -11 -		400	doo
34	0	0	ъ	-1	Ð	2)	500	250
-34			1	M. wi	SERVE A	1	mad.	A House	
	Leav	m bou	e varial	10252		Enterin	y warrab	le = sz Pint	clament= 1
delan.	Alter	Gan	11- Jo)	dan 1	LOW OF	cetions		1	
Thy		you;		9	- 1	o I	- 1	- 1	
Basic	7.1	મ, લ	γ,	3,	5,	53	1 57	Solution	Ratio
2	-18	0	0	1	2	0	0	2600	
L.U	0	0	11	-10	2.	0	0	600	
22			0	-1	10	1	0	200	-
	1 CA (70 K)								
S3!	0	0	0	1	-1	0	0	200	N. E.

	AL	er 3 %	reentions	we has	re m	o enter	ing variable	e ·	
	100 00		43.4			11.800			
1/12-		71,02	00 S M	= 100	, 5,	= 0 5.	, 5, 2 20	0,5000	
	2.	1/10	4.5	151-	0	810	1		
15/16.05	And	7	man = 2	\$00	100	1 165	Story por	and .	
								hial solution.	
Aoz	Mani	mize	Z=71,+22	+×3	aubi	at to	1 Se 1		
	CI.) Ym, 7	+5x, +3n	2 515	U	1/3	EV.		
						ER	E 174	5	
			71, 1						
	In sm	mplen.	method	- w 4.	w, + S	x2 + 3x	13 + 9 = 15	F0	
		-),	n. +	7×1 + ×	3 + · S	= 12_	
								7,7,7,5,2	
	n=	5 0					\$5,,52		
Baste	2	74	7	42	S,	5 2	Solyhon.	12a to	
Z	1	-1	Lo- Land	-1-	0	-30 To	0	CANAL CONTRACTOR	
Sı	0	4	5 11		15	0	15	15/4	
S	0	10	7	1	0	1	12	6/5	
	Entering variable = M1 Leaving variable = 52 Protekments 10								
	First	iterato	n: is non	moldé	0		,		
Besic	2	n,	N	713	Sı	52	Solyhon	Ratio	
_ 2	1	0	-3/10	-%	0	1/10	615		
Si	0	0	1 11/5	13/5	. 1	-215	51/5	51/13	
71	0	J	7/10	1/10	0	1/10	6/5	12	
	Enterin	gvarial	olc = 73	Leavi	y Ba	gic Varial	ok= 5, 11.	ot climint=13/5	

2 1 M3 0 M, 0 Enter Enter Thi Basic 2 2 1 M3 0 S2 0 Ail Thi Thi Thi Thi Thi Thi Thi T	ing va ing va	riable ration	6/13 11/13 8/13 8/13 = 52 , 1 2/2 5/3 16/3 teestion	O I Caving	51 1/3 1/3 -1/3	-1/26 -2/13 1/16 miable = X	5 1/13	clume	-51/2 7 mt=3/26
2 1 2 2 3	ing va ing va	riable ration	6/13 11/13 8/13 8/13 = 52 , 1 2/2 5/3 16/3 teestion	O I Caving	9/26 5/13 -1/26 P Bagie Va 1/3 1/3 1/3 -1/3	-1/26 -2/13 1/16 miable = X	Solution 5	clume	-51/2 7 mt=3/26
My D Enter Basic 2 2 1 My D S2 0 All Thi Thi Basic 2 Thi Basic 2 Thi Basic 3 Thi Basic 3 Thi Color of the second and	ing va ing va	riable ration	11/13 6/13 6/13 = 52 , 1 2/2 5/3 16/3 teration	Ma o leaving	5/13 -1/26 P Bagie Va 1/3 -1/3 -1/3	1/26 mable = X	Solution 5	clume	7 mt=3/26
Busic 2 2 1 No D Solver All This Busic 2 2 1 No D Solver All This This All This This All This This	ing va and ite n ter z	riable ration /3 /3 26/3	2/3 2/3 16/3 teration	No 1	SI V3 V3 -V3	1/26 mable = X	Solution	clume m	
Enter Thi Basic 2 2 2 1 No 0 So o Ai Thi Thi Thi Thi Thi Thi Thi	ter 2	riable ration	= 5, 1 2/3 5/3 16/3 teration	No 1	Solva 1/3 1/3 1/3 1/3 1/3 1/3	S ₂	Solution 5	m 5	
Basic 2 2 1 2 1 2 1 2 0 52 0 41 1 74 1 74 1 74 1 74 1 74 1 74 1 74	14 14 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	/3 /3 26/3	2/3 5/3 16/3 teration	N ₂ 0 1 0	51 1/3 1/3 -1/3	5 <u>0</u>	Solution 5	m 5	ble
2 1 N3 0 S2 0 A1 Th	14 +4 	3 /3 26/3	2/3 5/3 16/3 teestis	0 0	V3 V3 -V3 se have	0	5	5	ble
2 1 N3 0 S2 0 A1 Th	14 +4 	3 /3 26/3	2/3 5/3 16/3 teestis	0 0	V3 V3 -V3 se have	0	5	5	ble
Ans 8 Mini	+4 her ! Z	/3 26/3 3 j	5/3 16/3 Heratus = 5	1 0 , 0	-1/3	1	<u>\$</u> 7	<u> </u>	ble
Sz O	tr	26/3 3. j	16/3 teration	· , ·	-1/3	ŀ	9 7		ble
dans Mini	w - Z	yna n	= 5	1 .	0	no l	ntainy	ratio	ble
= 102				=0.	N325		= 0, 5,	=]	
= (1)2	mize	222	4+ 2	2 34,	-42	subject	友	1	2
1 0000	+×2	22	city -	not3n	£2 ,0	ili) nes	4 7 31	, N. 2	0.5
Cox	shiel	Meth	ud 1	0		1	91	12	
al Immobile	TML		Ben	Juliane	1 1	Corner	Solution	2	
				- 2	-ely	-1	ramali	Land	
100				Corr	ner Point	(%	(N.)		Z
	-21.0		all.	13	A	- 0		-de	3
21/13	10		5017		B	(6.8)			2
5.	3		1/10	0	C	-1/1C3	The state of the s		6
Mel Man la la	1,3	1	jan	2.8 2	and.	2 3	aldjorne	derla.	3
	1	10		- 4	S. Jane		J. A.		
		8	105	3 4	5			24,	

	We observe that for y = 0.8 = 0.4 we have minimum
- 15	We observe that for M=0.8, M=0.4, we have minimum value of 2 2 min=2
	/ Emin Z
27/12	Simplen Method:
P	
Azzeto	Constants 2x, + n2 - s, + R, = 2
	$x_1 + 3x_2 + s_2 = 2$
	1 2 9
	Sisis > surphoand slack variables & - artificial variable
	Minimize Z= 3x, -x2 + 0.5, + 0.52 +0.53 +MR,
	2-34, +x, to-s, to-s, to-s, -MR, = 0
	pul that 4, 4, 3, 5, 5, 5, R, ≥0
	n=6 m=3
	Basic variables = (R, s, s, s2)
	A اورد عمل العبرلند، اليد بالعدم المرود إ-
	Initial Simplex Table
1.5	William Provide - it and a top of the
Basic	My M2 SI S2 S3 R, Solution Ratio
Z	-3 1 0 0 0 -M 10
R,	2 1 -1 0 0 1 2
Sz	1 3 0 11 0 0 12
33	0 1 0 0 1 0 4
	New z- Pou = Old z-row + Mx Ri-esw
D.	
Basic.	7, 72 SI Sz S3 R1 Solution Patho
7	-3+2M 1+M -M -0 0 0 2 M
M	2 1 -1 0 0 1 2 1
52.	3 0 1 0 0 2 2 2
22	0 1 0 0 1 0 4 40
	Leaving Basic Variable = f, Enterry Variable = x, Avot Element = 2
_	A STATE OF THE PARTY OF THE PAR

	15+	Iteration)ATE	
Basie.	2(, 0%	712	\S,	S	- 181	R	Solution	Ratio
2	0	5/2	-3/2	0	0	3/2-M	3	4
Box.	1	1/2	-1/2	0	0	1/2	1	2
S2	0	5/2	1/2	1	0	-1/2	1	2/5
S ₃	0	1	0	0	1	0	Ч	4
	Enter	ing vari	able = n	- Lea	ump yar	able =s,	Prot Elen	nunt=5%
		0		1	0		,	12
	2nd i	teration						
Basic	M, W	N ₂	Sylde	S	. s ₃	R	Solyhon	Ratio
2 /	110	0	1-2	3 1	0	2-M	2	
Э,	= 100	0	-3/5	-1/5	R TO	1 - 3/5	4/5	
Ж2	0	021	1/5	2/5		1/5	2/5	
	0	0	-1/5	-45		My /s	18/5	
	A 1	. 1		46,16	LR		in siced	
	Alter	2nd ite	retion	no e	ntering	variable		
		Thus	Zmin = 2		U	on had	100	
	WIT	יוור לי	- 4/5 =	0.8	N's	2/5=6.4	, 52 = 18/5	= 3.6
	71.	1+ -			SILE S	Sea Control	£ 15	Econo.
-	INS 8	telulien 5	o to a	grome	nt usi	the the	graphizal so	lution
Δ	DE-14	M.		- 9	£0.		1 2	
Otroy	- EA	Minim	112e 2	2 24,	7 12	12 71		
	suga	x x (1)	54, 74,	23	Cho Lat	1245 - P	d11) 4,+24	. 34
	S. 1	1, н. 2 meth	1	-	- 104/0			
	ample	meth	04			i well o	1 0099	
	Constrai	ale 1	34, 14		2 - 2		Po	h)1
	Conjugi	nP .	4-1 12	~	-6	+! .	r,K	-artificial
			17, 75	N 4	6 31) 52°	6 symple	Variable
- 8	9/	u a	N, 12	0 0	21		sz-slack	Variable.
94	Mak	, H, Q	1 child	+ 11	e 1M	R.	3) - TIME	A1.0016
rafic al		124 22					1 pour	
	N = 6	W-2	Rus	2 -17	10	P C		
	-(-0	1 -5	CVSIC V	47TU SIC		1 Re, Se,		
	THE RESERVE TO SERVE	The Part of the Pa				70%		

T HOLE	implem To	ble					DATE	
Basic	Э,	N.	s,	s,	R	R	Solution	Ratio
\$ 2		-1		0	-M	-M	0	
RI		d Alexander				0	-	
Re2	Ч		-1	0	0	T	6	
S	1	2	0	The State Control of the State	10	0	4	
		2-80m=						
Basic	1000	712					Solution	Ratio
2	-2+7M	-1+44			0		-9M	
R		In. 1.			1,		3	J
Rz	ч		-1	0		1	6	. 3/2
SL	1	2		1		0	4	4
	Enterine	variable "	m, 1.	min he	DZ varia	ble = R.	Pivot Elem	ent=3
	First	iteration!	1 121	avi g	(a) Volying	01- 11	or agricultural	
Basic	χ,	7.	S, N	S	12	P,	Solution	1 Patie
	0	3+51/3	-M	0 (-	74+2/2	0	2M+ 2	11111
×1	Link	1/2	0	0	Va	0	1	3
RZ	0	5/3		0			#2	6/5
52	0	5/3	0	1 600	-1/2	0	S. 1	9/5
	Enterin	a voutable	cax,	Leaving	barn va	mable= K	2, Avot Eler	
	Sum	itantion	1	, 0	100		-/	
Basic	26,	7,	Sı		12,	Re	Solyton	Ratio
	0	0	-1/5	0	200	15-M		
7,	-1	6	1/5	D	315	-1/5		
7/2	0	11	-3/		-4/5		615	
SZ	0	0	1	1	1	-1	1	
	Alter	2 ites	alim	no	enterine	vaciable	s left.	
	6		1		U		0	
	Zmin	= 12=2.4	With	W, = 3	3/5	4, = 6/_	- s ₂ = 1	
	trans.	5	2	145	1	10	102-ft.	8 -
18			and	other	non-bo	ent ragi	able.	
			fe.		= R = R2 =		A STATE OF THE STA	

Ans	Decision	n Vanil	Seo:					
7110	Corar	y.=	Number	100.	2 0/ /	ard were	books	
	1	~ a 1	Number Number	N 1003	0 1	gruback	books	
		7	4 = =	33	0)			
	Ole. H	u 11	(a. 1 o)	Un mis	, Z=	600 n, t	500M-	
	-10	- Junes	ion: 01	4.4.11.2	gra h	O PES	10	
CT.	Constas	nb	2x. +x.	2 80)	Slent	y Psess ho	Jun
	1 191		7, +24,	≥ 60	10	- pr. 13-	I Haman	1
l.	5		- M, X2	District Control		Non neg	ativity	
1	3		1,75		, I-	0	77	
1	Simile	in Methol) 0		10			
				small and		r din	an province.	
	Court	anto	2×, +					
5 - 4	Salte L			242 - 5				
	5 114	Э. Э					curoluna	anoll.
5			1 4200	14/1		R 8 _	och fired.	mil
200	137	N.	A.1"-	- 0	1-	11,13	Tan page	- CANCO
205	Himm	ize o	2 = 600	W. + 5	60 M. +	MPi +r	K2	
2-11,	wall to be		- 600x,					
	Initra		en Jable			144es =		
Baga	74,	×	'S ₁		P,	R.	Solution	Ratio
2	-600	-500		0	-M	-M	0	1 1
R,	2	15-		0	1	0	80	
P.	100	2	0	-1	0	A	60	
			1			13	00	
	New ?	- 100 F	old 2-	1000 +	Medre	WA + Mal	Ra-low	
Barr	7(1	· NI	. · S,	Sa	R	p. P2	solution	Raho
2	3M-600	3M-500		-M	0	0	1404	
	2	A Par	n -1 1 00	9	1.	0	8.	80
fr fr	1	2	0 0	1	0	1	60	30_
	Entering va	cll	The same	and the second second	11 - 1	o .	Element =	2

	1st Iter	note					DATE		
Basic	71	42	S	SL	R,	R	Solution	Ratio	
2	34-200)/2	0	-M	4/2-25			50 MH500		
RI	3/2	0	-)	1/2				1043	
712	1/2	1	0	-1/2				6.	
	Entering v	aniable=	m, to	aving &	aniable	= R, , F	ivot Eleme	nt=3/2	
	2nd It	erahbon							
Basiz	74,	7/2	S	52	R	Rz	Solution	7	
2	0	0	-700/3	40%	-11-120	o -H+400	80000/	3	
X,	1	0	-2/3	1/3	2/3	-1/3	100/3		
72	0	1	1/3	-2/3	-1/3	2/3	40/3		
	Alter		n 2 800				entering		
	with	γ,	3	9ml	7 ₂ 2	3			
	Mard were books printed in one how = loo x 100 = 10000								
	0			. 1			3	3	
	Taperbuk	book	o prin	ted st	me	hour 2	90×100 =	3	
	Paperbule books printed in one hour = 40x100 = 4000 Total minimum wat = 1NR 80000								
	7	of mil	nious on	LOST	> 110	1 0000	0		
	7	ot mi	njourn	LOST	> 110	3			