Solução do Problema perold - Solver HiGHS

Análise Computacional

17 de setembro de 2025

1 Informações do Problema

Informações do Problema:

• Nome: perold

• Número de Variáveis: 1376

• Número de Restrições: 625

• Inviabilidade Primal: 0.000e+00

• Inviabilidade Dual: 6.106e-15

• Valor Primal: -9.381e+03

• Valor Dual: -1.124e+04

• Gap: -4.444e-19

• Número de Iterações: 30

2 Variáveis Primais e Custos Reduzidos

Tabela 1: Variáveis primais e custos reduzidos do problema perold

Coordenada :	x Valor x	Coordenada z	Valor z
1	0.144000	1	0.00000
2	-0.000000	2	0.00000
3	2.385815	3	0.00000
4	-0.000000	4	0.00000
5	-0.000000	5	0.00000
6	12.043892	6	0.00000
7	-0.000000	7	0.00000
8	-0.000000	8	0.00000
9	544.500000	9	0.00000
10	50.600000	10	0.00000
11	0.000000	11	18.9785'
12	35.600595	12	0.00000

Coordenada	x Valor x	Coordenada z	Valor z
13	-0.000000	13	0.000000
14	0.676919	14	0.000000
15	0.176323	15	0.000000
16	0.329660	16	0.000000
17	0.000000	17	170.39386
18	0.000000	18	25.211360
19	0.284040	19	-313.34194
20	-0.000000	20	0.000000
21	0.222222	21	0.000000
22	0.000000	22	52.383060
23	0.000000	23	174.86325
24	400.000000	24	-0.086733
25	17.466667	25	0.000000
26	0.000000	$\frac{-5}{26}$	333.53078
27	0.000000	27	511.43074
28	0.000000	28	699.45303
29	0.000000	29	892.53649
30	24.000000	30	0.000000
31	0.000000	31	7.340429
32	5.961308	32	0.000000
33	0.000000	33	7.043064
34	2.906812	34	0.000000
35	0.210379	35	0.000000
36	0.000000	36	28.562914
37	0.000000	37	174.54828
38	300.000000	38	-0.321511
39	57.854137	39	0.000000
40	0.000000	40	388.90003
40	0.000000	41	636.63316
42	0.000000	41 42	901.13029
43	0.000000	43	901.13029
45 44	0.000000	43 44	1451.1154
	164.000000	45	
45 46	17.903728	45 46	0.000000 0.000000
47	17.204366	47	0.000000
48	65.596969	48	0.000000
49	26.707031	49	0.000000
50	0.000000	50	30.259966
51	0.000000	51 50	26.242999
52 50	0.000000	52 52	30.259966
53	0.000000	53	30.259966
54	0.000000	54	354.25012
55 50	-0.000000	55	0.000000
56	0.000000	56	0.416851
57	0.000000	57	0.248532
58	-0.000000	58	0.000000
59	18.926669	59	0.000000
60	3.004934	60	0.000000
61	0.000000	61	0.000000

Coordenada	a x Valor x	Coordenada z	Valor z
62	0.015980	62	0.000000
63	0.000000	63	0.000000
64	0.000000	64	0.000000
65	0.000000	65	0.000000
66	0.002089	66	0.000000
67	0.000000	67	-12.764980
68	0.721591	68	0.000000
69	7.000000	69	-4.016966
70	0.000000	70	2.543781
71	0.000000	71	-82.503930
72	0.000000	72	0.000000
73	0.000000	73	4.016966
74	2.058517	74	0.000000
75	2.446965	75	0.000000
76	0.000000	76	12.950479
77	0.000000	77	0.065053
78	0.000000	78	4.366634
79	0.154173	79	-2.338217
80	0.000000	80	83.318600
81	3.347589	81	0.000000
82	14.453675	82	0.000000
83	24.033957	83	0.000000
84	15.249960	84	0.000000
85	29.627595	85	0.000000
86	81.086540	86	0.000000
87	144.465239	87	0.000000
88	308.270532	88	0.000000
89	247.017858	89	0.000000
90			
	65.574321	90	0.000000
91	754.052087	91	0.000000
92	183.500046	92	0.000000
93	621.209961	93	1.137864
94	18.763244	94	0.000000
95	2909.648529	95	0.000000
96	210.480000	96	2.115088
97	111.129990	97	-9.870588
98	84.422959	98	0.000000
99	34194.985673	99	0.000000
100	52334.985673	100	0.000000
101	0.000000	101	0.016265
102	0.000000	102	0.016389
103	0.000000	103	0.014913
104	0.000000	104	0.016344
105	0.000000	105	0.015371
106	0.000000	106	0.016626
107	0.000000	107	0.016409
108	5521.097656	108	-0.015918
109	924.749756	109	-0.015985
110	11927.218750	110	-0.014900

Coordenada	x Valor x	Coordenada z	Valor z
111	7484.308594	111	-0.01624
112	3575.699463	112	-0.01537
113	0.000000	113	-0.01662
114	15216.585940	114	-0.01630
115	1105.481445	115	-0.00544
116	496.057617	116	-0.01100
117	4025.814209	117	-0.00797
118	1947.390381	118	-0.00776
119	0.000000	119	0.002124
120	0.000000	120	0.000869
121	5203.980469	121	-0.00944
122	0.000000	122	133.72960
123	0.000000	123	93.19763
124	0.956108	124	0.000000
125	14.714185	125	0.000000
126	0.000000	126	21.71358
127	0.000000	127	76.94956
128	0.000000	128	0.774409
129	0.000000	129	0.480254
130	-0.000000	130	0.000000
131	13.149405	131	0.000000
132	0.000000	132	15.56637
133	0.358448	133	0.00000
134	0.336446 0.149316	134	0.000000
134 135	0.149510 0.000000	135	0.000000
136	-0.000000	136	0.000000
137	-0.000000	137	0.000000
138	0.000000	138	0.000000
139	0.000000	139	235.00651
140	0.000000	140	0.053444
141	7.500858	141	0.000000
142	5.509775	142	0.000000
143	1.270083	143	0.000000
144	0.383975	144	0.000000
145	46.249301	145	0.000000
146	1.068245	146	0.000000
147	0.079700	147	224.66842
148	-0.000000	148	0.000000
149	0.000000	149	0.147464
150	0.000000	150	1.769397
151	-0.000000	151	0.000000
152	0.000000	152	-294.6395
153	49.905889	153	0.000000
154	30.000000	154	-0.04807
155	-0.000000	155	0.000000
156	0.448898	156	0.000000
157	-0.000000	157	0.000000
158	0.000000	158	25.23635
±00	0.000000	100	25.25000

Coordenada	x Valor x	Coordenada z	Valor z
160	0.000000	160	85.48441
161	-0.000000	161	0.000000
162	0.068748	162	0.000000
163	0.007542	163	0.000000
164	-0.000000	164	0.000000
165	2.051717	165	0.000000
166	3.940156	166	0.000000
167	11.343774	167	0.000000
168	12.639732	168	0.000000
169	17.012418	169	0.000000
170	3.788331	170	0.000000
171	35.094879	171	0.000000
172	17.110180	172	0.000000
173	0.350870	173	0.000000
174	0.000000	174	713.11779
175	5.813269	175	0.000000
176	0.000000	176	0.083370
177	0.371170	177	0.000000
178	10.842000	178	0.000000
179	0.000000	179	5876.8604
180	-0.000000	180	0.000000
181	653.736591	181	0.000000
182	192.200405	182	0.000000
183	0.000000	183	6.426473
184	42.901994		
		184	0.000000
185	0.000000	185	1.291795
186	0.725981	186	0.000000
187	0.213054	187	0.000000
188	0.274937	188	0.000000
189	0.000000	189	34.57538
190	0.343742	190	0.000000
191	0.304405	191	0.000000
192	0.000000	192	1.380040
193	0.548889	193	0.000000
194	0.000000	194	4.201638
195	0.000000	195	14.02575
196	588.000000	196	-0.00283
197	25.676000	197	0.000000
198	0.000000	198	26.75245
199	0.000000	199	41.02178
200	0.000000	200	56.10302
201	0.000000	201	71.59022
202	23.978274	202	0.000000
203	0.000000	203	0.496210
204	5.774809	204	0.000000
205	0.000000	205	0.408796
206	4.918462	206	0.000000
207	0.519635	207	0.000000
208	0.000000	208	6.745801

Coordenada	x Valor x	Coordenada z	Valor z
209	0.000000	209	41.223666
210	441.000000	210	-0.067002
211	85.045582	211	0.000000
212	0.000000	212	91.847853
213	0.000000	213	150.35583
214	0.000000	214	212.82302
215	0.000000	215	277.28693
216	0.000000	216	342.71489
217	132.335498	217	0.000000
218	16.096497	218	0.000000
219	18.325715	219	0.000000
220	73.159461	$\frac{-2}{220}$	0.000000
221	31.853689	221	0.000000
222	0.000000	222	0.922155
223	0.000000	223	1.655937
224	0.000000	224	3.581045
225	0.000000	225	10.103564
226	0.000000	226	159.79675
227	0.000000	$\frac{220}{227}$	0.009583
	0.000000		
228 229		228	0.270701
	0.000000	229	0.161395
230	-0.000000	230	0.000000
231	68.265271	231	0.000000
232	10.326746	232	0.000000
233	0.000000	233	0.000000
234	0.105083	234	0.000000
235	0.000000	235	0.000000
236	0.000000	236	0.000000
237	0.000000	237	0.000000
238	0.001813	238	0.000000
239	0.000000	239	0.181781
240	0.625779	240	0.000000
241	7.000000	241	-1.925108
242	2.000000	242	-8.033643
243	0.000000	243	-142.64953
244	0.000000	244	9.181410
245	0.000000	245	8.447627
246	0.000000	246	6.522520
247	1.749555	247	0.000000
248	3.554255	248	-0.084185
249	0.000000	249	0.033809
250	0.000000	250	2.190247
251	0.000000	251	8.158482
252	0.000000	252	143.41215
253	4.493045	253	0.000000
254	14.163745	254	0.000000
254 255	28.963131	$\frac{254}{255}$	0.000000
256	14.338472	$\frac{256}{256}$	0.000000
		Z.4 H. I	

Coordenada	x Valor x	Coordenada z	Valor z
258	82.881641	258	0.000000
259	177.255767	259	0.000000
260	322.090140	260	0.000000
261	282.253347	261	0.000000
262	70.754666	262	0.000000
263	824.912140	263	0.000000
264	229.752085	264	0.000000
265	662.721015	265	0.000000
266	19.527087	266	0.000000
267	2974.511001	267	0.000000
268	234.799988	268	0.969617
269	175.309174	269	0.000000
270	143.455492	270	0.000000
271	40057.693837	$\frac{271}{271}$	0.000000
272	40057.693837	272	0.000000
273	0.000000	273	0.000188
274	0.000000	$\frac{274}{274}$	0.000608
275	0.000000	275	0.0000021
276	0.000000	276	0.000021 0.000427
277	0.000000	277	0.000421
278	0.000000	278	0.000000
279	0.000000	279	0.000251 0.000478
280	4599.465845	280	0.000478
281	1127.249268	281	-0.000367
282	0.000000	$\frac{281}{282}$	0.00030
283	9123.203125	283	-0.000328
284	2672.479791	284	0.000326
285	0.000000 18548.679690	285	-0.000291
286		286	-0.000367
287	0.000000	287	0.000661
288	604.683105	288	-0.000052
289	0.000000	289	0.000485
290	0.000000	290	0.000207
291	0.000000	291	0.001104
292	0.000000	292	0.000813
293	0.000000	293	0.000066
294	0.000000	294	86.187530
295	0.000000	295	485.51394
296	0.000000	296	0.011692
297	10.915561	297	0.000000
298	0.000000	298	592.07153
299	0.000000	299	76.949560
300	0.000000	300	0.021143
301	0.000000	301	0.013112
302	0.000000	302	7.927887
303	0.000000	303	0.628078
304	0.000000	304	2.192518
305	0.000000	305	70.477473
306	0.000000	306	54.579928

Coordenada	x Valor x	Coordenada z	Valor z
307	0.000000	307	18.783353
308	0.000000	308	159.896512
309	0.000000	309	8.320163
310	0.000000	310	75.633887
311	0.000000	311	106.08207
312	0.000000	312	0.386187
313	0.000000	313	0.101720
314	0.000000	314	0.225642
315	0.000000	315	0.141234
316	0.000000	316	0.495411
317	0.000000	317	0.379355
318	0.000000	318	0.126743
319	0.000000	319	17.794729
320	0.000000	320	47.854976
321	1.503292	321	0.000000
$321 \\ 322$	0.000000	$321 \\ 322$	0.412508
323	-0.000000	323	0.000000
324	-0.000000	324	0.000000
$\frac{324}{325}$	84.642431	$\frac{324}{325}$	0.000000
	30.000000		-0.014218
326		326	
327	-0.000000	327	0.000000
328	2.791342	328	0.000000
329	0.066000	329	0.000000
330	0.299258	330	0.000000
331	0.000000	331	85.674884
332	0.000000	332	49.569611
333	-0.000000	333	0.000000
334	0.469252	334	0.000000
335	0.000000	335	4.672164
336	-0.000000	336	0.000000
337	5.014262	337	0.000000
338	4.253145	338	0.000000
339	17.161487	339	0.000000
340	28.892864	340	0.000000
341	24.977604	341	0.000000
342	4.867493	342	0.000000
343	68.921389	343	0.000000
344	22.873581	344	0.000000
345	35.971016	345	0.000000
346	190.681519	346	0.000000
347	0.558090	347	0.000000
348	0.000000	348	80.415418
349	9.246522	349	0.000000
350	0.000000	350	0.058348
351	1.484681	351	0.000000
352	13.193877	352	0.000000
353	0.000000	353	70.385248
354	-0.000000	354	0.000000
354 355	951.825241	$\frac{354}{355}$	0.000000
999	001.020241	อออ	

Coordenada	x Valor x	Coordenada z	Valor z
356	333.800810	356	0.000000
357	0.000000	357	0.110749
358	48.766208	358	0.000000
359	0.330000	359	-0.378218
360	1.066279	360	0.000000
361	0.170647	361	0.000000
362	0.220213	362	0.000000
363	0.000000	363	34.105513
364	2.690000	364	-0.059056
365	0.298768	365	0.000000
366	0.000000	366	1.861013
367	0.740282	367	0.000000
368	0.000000	368	1.670190
369	0.000000	369	5.575369
370	344.507279	370	0.000000
371	15.043485	371	0.000000
372	0.000000	372	10.63435
373	0.000000	373	16.30654
374	0.000000	374	22.30147
375	0.000000	375	28.45777
376	27.418999	376	0.000000
377	0.000000	377	0.000000
378	5.246823	378	0.130030
379	0.000000	379	0.117864
380	6.513652	380	0.000000
381	0.974053	381	0.000000
382	0.000000	382	1.035459
383	0.000000	383	6.327699
384	648.000000	384	-0.00663
385	124.964937	385	0.000000
386	0.000000	386	14.09834
387	0.000000	387	23.07913
388	0.000000	388	32.66764
389	0.000000	389	42.56264
390	0.000000	390	52.60562
391	136.898596	391	0.000000
392	18.241960	392	0.000000
393	19.677685	393	0.000000
394	90.011235	394	0.000000
395	0.000000	395	0.235452
396	0.000000	396	1.471112
397	0.000000	397	2.181967
398	0.000000	398	2.176177
399	0.000000	399	33.51981
400	-0.000000	400	0.000000
401	0.000000	401	0.029661
402	0.000000	402	0.018457
403	0.000000	403	68.55824
	0.00000	100	55.550 2 I

Coordenada	x Valor x	Coordenada z	Valor z
405	21.972740	405	0.000000
406	0.744503	406	0.000000
407	0.000000	407	0.020386
408	0.000000	408	0.239140
409	0.000000	409	1.156499
410	0.000000	410	6.601062
411	0.000000	411	18.526728
412	0.000000	412	0.925153
413	0.000000	413	0.269830
414	7.000000	414	-0.441025
415	1.560618	415	0.000000
416	0.000000	416	-15.492364
417	0.000000	417	5.616829
418	0.000000	418	4.381169
419	0.000000	419	3.670314
420	0.000000	420	3.676104
421	4.320444	421	-0.814653
422	0.000000	422	-0.237072
423	0.000000	423	0.748578
424	0.000000	424	0.138814
425	0.000000	425	16.325275
426	6.736297	426	0.000000
427	15.673945	427	0.000000
428	32.922061	428	0.000000
429	17.771454	429	0.000000
430	42.557835	430	0.000000
431	89.566631	431	0.000000
432	222.979373	432	0.000000
433	391.542409	433	0.000000
434	347.378883	434	0.000000
435	81.237453	435	0.000000
436	993.886814	436	0.000000
437	288.890104	437	0.000000
438	766.126342	438	0.000000
439	21.129384	439	0.000000
440	3272.645631	440	0.000000
441	309.000000	441	0.955774
442	226.652535	442	0.000000
443	47373.274092	443	0.000000
444	47373.274092	444	0.000000
445	2342.142090	445	-0.000069
446	0.000000	446	0.000646
447	0.000000	447	0.000016
448	0.000000	448	0.000446
449	1582.267355	449	0.0000110
450	0.000000	450	0.000193
451	0.000000	451	0.000495
452	0.000000	452	0.000160
453	1370.249756	453	-0.000355
	1010.210100	100	

Coordenada	a x Valor x	Coordenada z	Valor z
454	7519.921712	454	0.000000
455	11089.886720	455	-0.000325
456	0.000000	456	0.000138
457	0.000000	457	-0.000198
458	22547.207030	458	-0.000359
459	0.000000	459	0.000958
460	735.034180	460	-0.000023
461	0.000000	461	0.000461
462	0.000000	462	0.000240
463	0.000000	463	0.001304
464	0.000000	464	0.000968
465	0.000000	465	0.000098
466	0.000000	466	15.602042
467	-0.000000	467	0.000000
468	0.000000	468	0.010887
469	6.368797	469	0.000000
470	-0.000000	470	0.000000
471	0.000000	471	76.683983
472	0.000000	472	0.004282
473	0.000000	473	0.004252 0.002656
474	0.000000	474	1.571586
475	0.000000	475	0.122921
476	0.000000	476	0.122321 0.429099
477	0.000000	477	12.626660
478	0.000000	478	1.710061
479	0.000000	479	1.741836
480	0.000000	480	56.162377
481	0.000000	481	1.628342
481	0.000000	482	1.026542 13.685025
483	0.000000	483	20.761361
484	0.000000	484	0.624629
	0.000000		0.024029 0.158173
485	0.000000	485	0.158173
486 487	0.000000	486 487	0.350807 0.219615
	0.000000		0.219013 0.770352
488		488	
489	0.000000	489	0.589888
490	0.000000	490	0.197083
491	0.093914	491	0.000000
492	-0.000000	492	0.000000
493	4.615000	493	-0.000627
494	0.000000	494	0.129516
495	-0.000000	495	0.000000
496	0.025938	496	0.000000
497	120.150574	497	0.000000
498	30.000000	498	-0.008229
499	0.361969	499	0.000000
500	2.650609	500	0.000000
501	0.200000	501	0.000000
502	0.324471	502	0.000000

Coordenada	x Valor x	Coordenada z	Valor z
503	0.000000	503	53.5874
504	0.000000	504	32.74780
505	0.000000	505	116.6600
506	0.214143	506	0.00000
507	0.021258	507	0.00000
508	0.010600	508	0.00000
509	8.501468	509	0.00000
510	8.833309	510	0.00000
511	21.548184	511	0.00000
512	33.173238	512	0.00000
513	35.174187	513	0.00000
514	7.900813	514	0.00000
515	95.377687	515	0.00000
516	25.270547	516	0.00000
517	39.264877	517	0.00000
518	228.462341	518	0.00000
519	0.619134	519	0.00000
520	0.000000	520	2.49367
521	10.257910	521	0.00000
522	0.000000	522	0.07365
523	1.564582	523	0.00000
524	27.874461	524	0.00000
525	0.000000	525	34.6644
526	-0.000000	526	0.00000
527	1426.138479	527	0.00000
528	475.350612	528	0.00000
529	1.809843	529	0.00000
530	53.878004	530	0.00000
531	1.330000	531	-0.3900
532	1.769751	532	0.00000
533	0.000000	533	1.64391
534	0.112713	534	0.00000
535	-0.000000	535	0.00000
536	3.760714	536	0.00000
537	0.348400	537	-0.4925
538	0.044520	538	-0.4325
539	0.554718	539	0.00000
540	0.445282	540	0.00000
541	0.000000	541	0.87655
542	1269.000000	542	-0.00003
543	46.195666	543	0.00000
544	0.000000	544	2.20563
545	0.000000	545	3.77521
545 546	0.000000	546	5.47137
547	0.000000	547	
			7.23081
548	27.464740	548 540	0.00000
549	0.000000	549	0.02546
550	3.808589	550	0.00000

Coordenada	x Valor x	Coordenada z	Valor z
552	6.919739	552	0.000000
553	0.000000	553	0.615309
554	0.689754	554	0.000000
555	0.310246	555	0.000000
556	921.246017	556	0.000000
557	126.994988	557	0.000000
558	0.000000	558	0.761622
559	0.000000	559	1.895123
560	0.000000	560	3.215380
561	0.000000	561	4.629822
562	0.000000	562	6.089739
563	170.653731	563	0.000000
564	21.502235	564	0.000000
565	21.955959	565	0.000000
566	112.891382	566	0.000000
567	0.000000	567	0.333050
568	0.000000	568	1.179168
569	0.000000		1.74577
		569	
570	0.000000	570 571	1.58701
571	0.000000	571 570	23.15377
572	0.000000	572 572	0.00891
573	0.000000	573	0.00000
574	2.381242	574	0.00000
575	-0.000000	575	0.00000
576	249.463043	576	0.000000
577	34.892577	577	0.00000
578	0.564436	578	0.00000
579	0.000000	579	0.00000
580	0.120154	580	0.00000
581	0.000000	581	0.00000
582	0.000000	582	0.00000
583	0.000000	583	0.00000
584	0.000000	584	0.83076
585	0.000000	585	0.56660
586	5.731158	586	0.00000
587	0.000000	587	0.59519
588	0.000000	588	-5.07630
589	0.000000	589	3.10872
590	0.000000	590	2.26261
591	0.000000	591	1.69600
592	0.000000	592	1.85476
593	5.235612	593	-0.71949
594	0.000000	594	-0.53391
595	0.000000	595	0.31204
596	0.000000 0.276835	596	-0.45513
590 597	0.270035 0.000000	597	5.92149
	10.003761	597 598	5.92149 -0.48718
598 500			
599	18.163837	599	0.00000
600	38.598580	600	0.00000

Coordenada	a x Valor x	Coordenada z	Valor z
601	21.210797	601	0.000000
602	53.234484	602	0.000000
603	108.414160	603	0.000000
604	277.456468	604	0.000000
605	469.549029	605	0.000000
606	435.020117	606	0.000000
607	102.587286	607	0.000000
608	1249.179335	608	0.000000
609	352.785358	609	0.000000
610	956.011070	610	0.000000
611	23.720822	611	0.000000
612	3900.493963	612	0.000000
613	402.699951	613	0.955893
614	267.727218	614	0.000000
615	50355.821006	615	0.000000
616	50355.821006	616	0.000000
617	2452.195801	617	-0.000085
618	0.000000	618	0.000650
619	0.000000	619	0.000098
620	0.000000	620	0.000443
621	1681.884422	621	0.000000
622	0.000000	622	0.000179
623	0.000000	623	0.000492
624	0.000000	624	0.000132
625	1660.499268	625	-0.000356
626	1541.562811	626	0.000000
627	13438.972660	627	-0.000320
628	0.000000	628	0.000146
629	0.000000	629	-0.000140
630	27323.207030	630	-0.000354
631	0.000000	631	0.000978
632	890.730957	632	-0.00002
633	0.000000	633	0.000463
634	0.000000	634	0.000405 0.000247
635	0.000000	635	0.000247 0.001315
636	0.000000	636	0.001315 0.000985
637	0.000000	637	0.000903
638	0.000000	638	9.902657
639	0.000000	639	9.902037 11.435429
640	0.000000	640	0.005769
641	5.277508	641	0.000708
642	0.000000	642	32.065113
643	0.000000	643	0.584328
644	0.000000	644	0.004051
645	0.000000	645	0.002513
646	0.000000	646	0.891098
647	0.000000	647	0.069697
648	0.000000	648	0.243301
649	0.000000	649	7.011776

Coordenada	x Valor x	Coordenada z	Valor z
650	0.241482	650	0.00000
651	0.094866	651	0.000000
652	0.000000	652	11.10932
653	0.000000	653	0.923279
654	0.000000	654	8.28931
655	0.000000	655	11.77180
656	0.000000	656	0.644183
657	0.000000	657	0.164214
658	0.000000	658	0.36426'
659	0.000000	659	0.228002
660	0.000000	660	0.79977
661	0.000000	661	0.61241
662	0.000000	662	0.20461
663	0.144529	663	0.00000
664	0.090655	664	0.00000
665	2.301467	665	0.00000
666	3.260593	666	0.00000
667	0.000000	667	7.09933
668	0.249904	668	0.00000
			0.00000
669	95.749382	669	
670	30.000000	670	-0.00471
671	0.311778	671	0.00000
672	2.304717	672	0.00000
673	0.200000	673	0.00000
674	0.000000	674	1.21530
675	0.000000	675	31.51528
676	0.000000	676	19.25932
677	0.000000	677	79.13176
678	0.636060	678	0.00000
679	0.008000	679	0.00000
680	0.002400	680	0.00000
681	5.852094	681	0.00000
682	5.512135	682	0.00000
683	23.888285	683	0.00000
684	40.990398	684	0.00000
685	33.877621	685	0.00000
686	10.171531	686	0.00000
687	123.011098	687	0.00000
688	34.110270	688	0.00000
689	41.899966	689	0.00000
690	258.686998	690	0.00000
691	0.957255	691	0.00000
692	0.058926	692	0.00000
693	15.456588	693	0.00000
694	0.348078	694	0.00000
695	1.295334	695	0.00000
696	41.837863	696	0.00000
	41.001000	050	0.00000
697	-0.000000	697	0.00000

Coordenada	x Valor x	Coordenada z	Valor z
699	1838.355094	699	0.000000
700	616.900414	700	0.000000
701	3.368735	701	0.000000
702	57.260339	702	0.000000
703	2.330000	703	-0.341753
704	1.974810	704	0.000000
705	0.000000	705	1.547003
706	0.086381	706	0.000000
707	-0.000000	707	0.000000
708	6.941012	708	0.000000
709	0.369200	709	-5.992314
710	0.055250	710	-6.949002
711	0.000000	711	1.366603
712	0.519163	712	0.000000
713	0.480837	713	0.000000
714	1864.000000	714	-0.000518
715	46.639471	715	0.000000
716	0.000000	716	0.705503
717	0.000000	717	1.785958
718	0.000000	718	3.063757
719	0.000000	719	4.440227
720	34.342184	720	0.000000
721	0.000000	721	0.063898
722	4.770197	722	0.000000
723	0.000000	723	0.000000
724	8.521299	724	0.000000
725	0.021299 0.000000	725	0.000000 0.126425
726	0.000000 0.110267	726	0.120425 0.000000
727	0.110207 0.889733	727	0.000000
728	579.486687	728	0.000000
729	53.718387	729	0.000000
730		730	0.000000 0.156487
	0.000000 0.000000		
731 732	0.000000	731 732	0.389383 0.660651
733	0.000000	733	$0.951271 \\ 1.251234$
734	0.000000	734	
735 73 <i>c</i>	190.137543	735	0.000000
736	20.182820	736	0.000000
737	26.522949	737	0.000000
738	131.801365	738	0.000000
739	0.000000	739	0.423483
740	0.000000	740	0.930068
741	0.000000	741	1.432150
742	0.000000	742	1.282753
743	0.000000	743	21.969916
744	0.000000	744	0.000030
745	0.000000	745	0.001234
746	0.000000	746	0.000736
747	0.000000	747	0.152147

749 51.415635 749 0.000000 750 0.000000 750 0.00000 751 0.624009 751 0.00000 752 0.000000 752 0.00000 753 0.000000 753 0.00000 754 0.010250 754 0.00000 755 0.000000 755 0.00000 756 0.000000 756 0.49753 757 0.000000 758 -0.05059 759 0.000000 758 -0.05059 759 0.000000 760 -7.66393 761 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 763 0.90719 764 0.000000 766 -0.42617 766 0.000000 766 -0.42617 766 0.000000 767 0.35562 768 0.337604 768 -0.32053 <td< th=""><th>Coordenada</th><th>x Valor x</th><th>Coordenada z</th><th>Valor z</th></td<>	Coordenada	x Valor x	Coordenada z	Valor z
750 0.000000 750 0.000000 751 0.624009 751 0.00000 752 0.000000 752 0.00000 753 0.000000 753 0.00000 754 0.010250 754 0.00000 755 0.000000 755 0.00000 756 0.49753 0.756 0.447148 758 7.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 766 -0.42617 767 0.000000 766 -0.42617 <t< td=""><td>748</td><td>387.670289</td><td>748</td><td>0.000000</td></t<>	748	387.670289	748	0.000000
751 0.624009 751 0.00000 752 0.00000 752 0.00000 753 0.00000 753 0.00000 754 0.010250 754 0.00000 755 0.000000 756 0.49753 757 0.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 763 0.90719 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 770 12.910257 770 -1.07347 77	749	51.415635	749	0.000000
752 0.000000 753 0.00000 753 0.00000 753 0.00000 754 0.010250 754 0.00000 755 0.000000 755 0.00000 756 0.000000 756 0.49753 757 0.00000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 763 0.90719 764 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 766 -0.42617 767 0.000000 769 8.55158 770 12.910257 770 -1.07347 77	750	0.000000	750	0.000000
753 0.000000 753 0.00000 754 0.010250 754 0.00000 755 0.000000 755 0.00000 756 0.000000 756 0.49753 757 0.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 763 0.99719 764 0.000000 763 0.99719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 7	751	0.624009	751	0.000000
754 0.010250 754 0.00000 755 0.000000 755 0.00000 756 0.000000 756 0.49753 757 0.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 763 0.90719 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 <td< td=""><td>752</td><td>0.000000</td><td>752</td><td>0.000000</td></td<>	752	0.000000	752	0.000000
755 0.000000 755 0.00000 756 0.000000 756 0.49753 757 0.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 773 23.164218 773 0.00000 <t< td=""><td>753</td><td>0.000000</td><td>753</td><td>0.000000</td></t<>	753	0.000000	753	0.000000
756 0.000000 756 0.49753 757 0.000000 757 0.45148 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 775 150.097625 775 0.00000	754	0.010250	754	0.000000
757 0.000000 758 -0.05059 758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000	755	0.000000	755	0.000000
758 7.000000 758 -0.05059 759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.79849 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000	756	0.000000	756	0.497534
759 0.000000 759 0.44418 760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000	757	0.000000	757	0.451485
760 0.000000 760 -7.66393 761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 779 127.856740 779 0.00000	758	7.000000	758	-0.050597
761 0.000000 761 1.91585 762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 780 1538.011780 780 0.00000	759	0.000000	759	0.444188
762 0.000000 762 1.40927 763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000	760	0.000000	760	-7.663937
763 0.000000 763 0.90719 764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 <	761	0.000000	761	1.915856
764 0.000000 764 1.05658 765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000	762		762	1.409272
765 6.384896 765 -0.40712 766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 778 509.761058 778 0.00000 779 127.856740 779 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 783 26.633714 783 0.00000 784 4827.081854 784 0.00000	763	0.000000	763	0.907190
766 0.000000 766 -0.42617 767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 783 26.633714 783 0.00000 784 4827.081854 784 0.00000	764	0.000000	764	1.056586
767 0.000000 767 0.35562 768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 783 26.633714 783 0.00000 784 4827.081854 784 0.00000 785 451.000000 785 1.00385	765	6.384896	765	-0.407125
768 0.337604 768 -0.32053 769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 783 26.633714 783 0.00000 784 4827.081854 784 0.00000 785 451.00000 785 1.00385 786 300.586964 786 0.00000 <td>766</td> <td>0.000000</td> <td>766</td> <td>-0.426179</td>	766	0.000000	766	-0.426179
769 0.000000 769 8.55158 770 12.910257 770 -1.07347 771 19.692862 771 0.00000 772 42.798949 772 0.00000 773 23.164218 773 0.00000 774 64.403675 774 0.00000 775 150.097625 775 0.00000 776 326.809511 776 0.00000 777 567.428057 777 0.00000 778 509.761058 778 0.00000 780 1538.011780 780 0.00000 781 412.464015 781 0.00000 782 1228.492332 782 0.00000 783 26.633714 783 0.00000 784 4827.081854 784 0.00000 785 451.00000 785 1.00385 786 300.586964 786 0.00000 788 58424.303921 788 0.00000 <	767	0.000000	767	0.355626
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	768	0.337604	768	-0.320537
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	769	0.000000	769	8.551582
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	770	12.910257	770	-1.073476
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	771	19.692862	771	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	772	42.798949	772	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	773	23.164218	773	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	774	64.403675	774	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	775	150.097625	775	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	776	326.809511	776	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	777	567.428057	777	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	778	509.761058	778	0.000000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	779	127.856740	779	0.000000
782 1228.492332 782 0.000000 783 26.633714 783 0.000000 784 4827.081854 784 0.000000 785 451.000000 785 1.00385 786 300.586964 786 0.000000 787 58424.303921 787 0.000000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007	780	1538.011780	780	0.000000
783 26.633714 783 0.00000 784 4827.081854 784 0.00000 785 451.000000 785 1.00385 786 300.586964 786 0.00000 787 58424.303921 787 0.00000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007	781	412.464015	781	0.000000
784 4827.081854 784 0.000000 785 451.000000 785 1.00385 786 300.586964 786 0.000000 787 58424.303921 787 0.000000 788 58424.303921 788 0.000000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007		1228.492332		0.000000
785 451.000000 785 1.00385 786 300.586964 786 0.00000 787 58424.303921 787 0.00000 788 58424.303921 788 0.00000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007				0.000000
786 300.586964 786 0.000000 787 58424.303921 787 0.000000 788 58424.303921 788 0.000000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007				0.000000
787 58424.303921 787 0.000000 788 58424.303921 788 0.000000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007				1.003853
788 58424.303921 788 0.000000 789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.000076				0.000000
789 0.000000 789 0.00037 790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.00007	787	58424.303921	787	0.000000
790 0.000000 790 0.00024 791 0.000000 791 0.00010 792 0.000000 792 0.000070	788	58424.303921	788	0.000000
791 0.000000 791 0.00010 792 0.000000 792 0.00007				0.000377
792 0.000000 792 0.00007				0.000249
				0.000108
702 1051 271751 702 0.00000				0.000076
	793	1951.371751	793	0.000000
				-0.000108
				0.000188
796 12090.000000 796 -0.00010	796	12090.000000	796	-0.000100

Coordenada	x Valor x	Coordenada z	Valor z
797	2025.000000	797	-0.000036
798	3970.387892	798	0.000000
799	0.000000	799	0.000034
800	0.000000	800	0.000144
801	0.000000	801	0.000103
802	33321.000000	802	-0.000055
803	0.000000	803	0.000455
804	0.000000	804	0.000228
805	0.000000	805	0.000366
806	0.000000	806	0.000483
807	0.000000	807	0.001070
808	0.000000	808	0.001029
809	0.000000	809	0.000308
810	0.000000	810	7.854734
811	0.000000	811	7.766615
812	0.000000	812	0.003858
813	0.000000	813	0.003196
814	0.000000	814	7.485308
815	0.000000	815	0.337240
816	0.000000	816	0.001170
817	0.000000	817	0.000725
818	0.000000	818	0.407543
819	0.000000	819	0.031876
820	0.000000	820	0.111274
821	0.000000	821	4.804782
822	0.160988	822	0.000000
823	0.034986	823	0.000000
824	0.000000	824	6.513104
825	0.000000	825	0.422261
826	0.000000	826	3.791110
827	0.000000	827	5.383825
828	0.000000	828	0.214220
829	0.000000	829	0.054485
830	0.000000	830	0.120861
831	0.000000	831	0.075650
832	0.000000	832	0.265359
833	0.000000	833	0.203195
834	0.000000	834	0.203133
835	0.000000	835	0.228313
836	0.171670	836	0.000000
837	0.000000	837	0.006657
838	0.000000	838	0.036024
839	-0.000000	839	0.030024 0.000000
840	0.000000	840	0.000000 0.129420
840 841	173.073742	841	0.129420 0.000000
842	30.000000	842	-0.002795
843	0.652124	843	0.002798
843 844	0.052124 1.047328	843 844	0.000000
845	0.200000	845	0.000000
	0.400000	040	

Coordenada	x Valor x	Coordenada z	Valor z
846	0.000000	846	2.170057
847	0.000000	847	21.420590
848	0.000000	848	13.090345
849	0.000000	849	69.129530
850	0.846411	850	0.000000
851	0.010000	851	0.000000
852	0.002800	852	0.000000
853	4.467511	853	0.000000
854	48.358428	854	0.000000
855	20.940500	855	0.000000
856	49.136999	856	0.000000
857	44.206039	857	0.000000
858	10.188195	858	0.000000
859	106.475645	859	0.000000
860	8.265201	860	0.000000
861	44.008037	861	0.000000
862	282.866724	862	0.000000
863	1.333030	863	0.000000
864	0.406215	864	0.000000
865	23.661306	865	0.000000
866	3.788727	866	0.000000
867	2.692338	867	0.000000
868	44.269798	868	0.000000
869	-0.000000	869	0.000000
870	1.129304	870	0.000000
	2335.844403		0.000000
871	608.450216	871	
872	6.629355	872	0.000000
873		873	0.000000
874	54.355728	874	0.000000
875	3.330000	875	-0.548121
876	1.739245	876	0.000000
877	0.000000	877	11.127176
878	0.000000	878	7.830810
879	0.000000	879	4.192244
880	11.173066	880	0.000000
881	0.387600	881	-4.938911
882	0.067150	882	-5.116203
883	0.000000	883	6.185658
884	0.000000	884	1.459721
885	1.000000	885	0.000000
886	934.492721	886	0.000000
887	15.678711	887	0.000000
888	0.000000	888	0.226448
889	0.000000	889	1.349042
890	0.000000	890	2.943291
891	0.000000	891	4.773369
892	40.108491	892	0.000000
893	0.000000	893	0.163610
894	4.029169	894	0.000000

Coordenada	x Valor x	Coordenada z	Valor z
895	0.000000	895	0.143523
896	6.602296	896	0.000000
897	0.000000	897	3.820386
898	0.000000	898	1.882912
899	0.000000	899	0.303458
900	1110.267296	900	0.000000
901	56.021822	901	0.000000
902	1.000000	902	0.000000
903	0.000000	903	0.319575
904	0.000000	904	0.952035
905	0.000000	905	1.742289
906	0.000000	906	2.608731
907	142.941832	907	0.000000
908	15.845471	908	0.000000
909	26.580921	909	0.000000
910	146.244914	910	0.000000
911	0.000000	911	0.646168
912	0.000000	912	1.143700
913	0.000000	913	1.667270
914	0.000000	914	1.348934
915	0.000000	915	15.182271
916	0.000000	916	0.000529
917	7.513942	917	0.000000
918	0.000000	918	0.005135
919	0.484651	919	0.000000
920	646.051093	920	0.000000
921	34.728316	921	0.000000
922	0.000000	922	0.043725
923	0.918280	923	0.000000
924	0.081720	924	0.000000
925	0.000000	925	0.238434
926	0.000000	926	1.924741
927	0.000000	927	5.848453
928	0.000000	928	0.250701
929	0.000000	929	0.201632
930	7.000000	930	-0.321939
931	0.000000	931	0.332730
932	0.000000	932	-1.251369
933	0.000000	933	1.515428
934	0.000000	934	1.017896
935	0.000000	935	0.494326
936	0.000000	936	0.812662
937	7.768289	937	-0.167043
938	0.000000	938	-0.175310
939	0.000000	939	0.628024
940	0.410752	940	-0.211180
941	0.410752 0.000000	941	2.204376
942	15.771699	942	-2.089246
943	18.127367	943	0.000000
	10.121001	JTU	

Coordenada	x Valor x	Coordenada z	Valor z
944	44.847598	944	0.000000
945	23.095628	945	0.000000
946	72.338120	946	0.000000
947	176.075456	947	0.000000
948	366.543274	948	0.000000
949	670.509315	949	0.000000
950	566.950694	950	0.000000
951	148.019148	951	0.000000
952	1765.663754	952	0.000000
953	440.650336	953	0.000000
954	1426.892127	954	0.000000
955	27.420890	955	0.000000
956	5435.779532	956	0.000000
957	506.199951	957	1.030688
958	326.874761	958	0.000000
959	75951.536316	959	0.000000
960	75951.536316	960	0.000000
961	0.000000	961	0.000699
962	0.000000	962	0.000142
963	0.000000	963	0.000204
964	10131.039060	964	-0.000010
965	2536.781313	965	0.000000
966	0.000000	966	-0.000152
967	0.000000	967	0.000133
968	14709.496090	968	-0.000376
969	0.000000	969	0.000034
970	31776.894530	970	-0.000088
971	0.000000	971	0.000116
972	0.000000	972	0.000057
973	0.000000	973	0.000150
974	20926.681453	974	0.000000
975	0.000000	975	0.000162
976	0.000000	976	0.000290
977	0.000000	977	0.000268
978	0.000000	978	0.000552
979	0.000000	979	0.000956
980	0.000000	980	0.001049
981	0.000000	981	0.000353
982	0.000000	982	2.867010
983	0.000000	983	2.913429
984	0.000000	984	0.002839
985	0.000000	985	0.019968
986	0.000000	986	2.617070
987	0.000000	987	0.167528
988	0.000000	988	0.107328
989	0.000000	989	0.000138
999	0.000000	990	0.000080 0.272963
990 991	0.000000	990 991	0.272903 0.022363
991	0.000000	991	0.022303 0.017940
	0.000000	334 	U.U1194U

Coordenada	x Valor x	Coordenada z	Valor z
993	0.167026	993	0.00000
994	0.080494	994	0.00000
995	0.103874	995	0.00000
996	-0.000000	996	0.00000
997	0.000000	997	0.06808
998	0.000000	998	0.61123
999	0.000000	999	0.86802
1000	131.214464	1000	0.00000
1001	0.000000	1001	0.00001
1002	0.000000	1002	0.00002
1003	0.000000	1003	0.00001
1004	0.000000	1004	0.00005
1005	0.000000	1005	0.00004
1006	0.000000	1006	0.00001
1007	-0.000000	1007	0.00001
1007	0.101908	1008	0.00000
1009	0.000000	1009	0.00000
1010	0.000000	1010	0.01550 0.14551
1010	0.000000	1010	10.53105
1011	0.000000	1011	0.77525
	186.420354		0.77323 0.00000
1013		1013	
1014	30.000000	1014	-0.00264
1015	0.000000	1015	1.03628
1016	0.000000	1016	0.08611
1017	0.534000	1017	0.00000
1018	0.178463	1018	0.00000
1019	0.000000	1019	19.79304
1020	0.000000	1020	12.09573
1021	0.000000	1021	62.26643
1022	0.768732	1022	0.00000
1023	0.113200	1023	0.00000
1024	0.003400	1024	0.00000
1025	8.231686	1025	0.00000
1026	0.000000	1026	0.00004
1027	33.010884	1027	0.00000
1028	44.081721	1028	0.00000
1029	0.000000	1029	0.00000
1030	10.062473	1030	0.00000
1031	168.824088	1031	0.00000
1032	89.915904	1032	0.00000
1033	45.694494	1033	0.00000
1034	302.210505	1034	0.00000
1035	0.996214	1035	0.00000
1036	0.918798	1036	0.00000
1037	11.675829	1037	0.00000
1038	4.627134	1038	0.00000
1039	0.000000	1039	0.01008
1040	37.588921	1040	0.00000
1041	0.000000	1041	4.97751

Coordenada	x Valor x	Coordenada z	Valor z
1042	1.379208	1042	0.000000
1043	2775.192462	1043	0.000000
1044	600.000018	1044	0.000000
1045	6.629355	1045	0.000000
1046	42.946365	1046	0.000000
1047	6.000000	1047	-0.468194
1048	1.915012	1048	0.000000
1049	0.000000	1049	12.120737
1050	0.000000	1050	12.120737
1051	0.000000	1051	6.736564
1052	15.016724	1052	0.000000
1053	0.408000	1053	-0.077837
1054	0.081600	1054	-0.671999
1055	0.000000	1055	10.226502
1056	0.000000	1056	2.597495
1057	1.000000	1057	0.000000
1058	0.000000	1058	0.000225
1059	-0.000000	1059	0.000000
1060	-0.000000	1060	0.000000
1061	0.000000	1061	1.380487
1062	0.000000	1062	3.487546
1063	0.000000	1063	5.957891
1064	33.460163	1064	0.000000
1065	0.000000	1065	0.564629
1066	1.310892	1066	0.000000
1067	0.000000	1067	0.602209
1068	1.347180	1068	0.000000
1069	0.000000	1069	0.000000
1070	0.000000	1070	0.000000
1071	0.000000	1071	0.000000
1072	1000.000000	1072	0.000000
1073	22.900146	1073	0.000000
1074	-0.000000	1074	0.000000
1075	1.000000	1075	0.000000
1076	0.000000	1076	0.000000
1077	0.000000	1077	0.000000
1078	-0.000000	1078	0.000000
1079	119.736301	1079	0.000000
1080	12.239919	1080	0.000000
1081	19.518278	1081	0.000000
1082	157.079054	1082	0.000000
1082	0.000000	1082	0.677526
1084	0.000000	1084	1.081829
1085	0.000000	1085	1.565920
1086	0.000000	1086	1.565920 1.565920
1080	0.000000	1087	12.949880
1087	0.000000	1088	0.000242
1089	8.184359	1089	0.000242
1009	-0.000000	1099	0.000000
1090	-0.000000	1090	

Coordenada	a x Valor x	Coordenada z	Valor z
1091	0.392400	1091	0.000000
1092	796.448366	1092	0.000000
1093	13.609986	1093	0.000000
1094	0.000000	1094	0.020025
1095	0.694945	1095	0.000000
1096	0.305055	1096	0.000000
1097	0.000000	1097	0.109197
1098	0.000000	1098	0.881481
1099	0.000000	1099	2.678437
1100	0.000000	1100	0.222646
1101	0.000000	1101	0.268455
1102	7.000000	1102	-0.215636
1103	0.000000	1103	0.121935
1104	0.000000	1104	1.032309
1105	0.000000	1105	0.888394
1106	0.000000	1106	0.484091
1107	8.015140	1107	0.000000
1108	1.170644	1108	0.000000
1109	9.449645	1109	-0.139015
1110	0.000000	1110	-0.241911
1110	0.000000	1111	0.522842
1112	0.155554	1112	0.000000
1112	0.000000	1113	-0.071952
1114	18.295166	1114	-2.213438
1114	14.298810	1115	0.000000
1116	37.145139	1116	0.000000
1117	22.331862	1117	0.000000
1117	79.444286	1118	0.000000
1110	200.814882	1119	0.000000
1119	412.073878	1119	0.000000
1120	759.035893	1120	0.000000
1121	646.169920	$\frac{1121}{1122}$	0.000000
1122	169.199754	1123	0.000000
1123 1124	2021.917404	1123 1124	0.000000
	482.002581		
1125	482.002581 1640.427173	1125	0.000000
1126		1126	0.000000
1127	28.261092	1127	0.000000
1128	6066.670738	1128	0.000000
1129	588.000000	1129	1.033381
1130	347.904999	1130	0.000000
1131	84200.564350	1131	0.000000
1132	84200.564350	1132	0.000000
1133	0.000000	1133	0.000706
1134	0.000000	1134	0.000144
1135	0.000000	1135	0.000207
1136	10435.929690	1136	-0.000010
1137	2812.298849	1137	0.000000
1138	0.000000	1138	-0.000153
1139	0.000000	1139	0.000133

Coordenada	a x Valor x	Coordenada z	Valor z
1140	17893.195310	1140	-0.000382
1141	0.000000	1141	0.000031
1142	38654.632810	1142	-0.000091
1143	0.000000	1143	0.000117
1144	0.000000	1144	0.000051
1145	0.000000	1145	0.000151
1146	17911.422186	1146	0.000000
1147	0.000000	1147	0.000158
1148	0.000000	1148	0.000288
1149	0.000000	1149	0.000266
1150	0.000000	1150	0.000554
1151	0.000000	1151	0.000953
1152	0.000000	1152	0.001053
1153	0.000000	1153	0.000354
1154	0.198178	1154	0.000000
1155	0.000000	1155	0.055041
1156	0.000000	1156	0.001051
1157	0.000000	1157	0.030364
1158	0.000000	1158	2.985446
1159	0.000000	1159	0.152873
1160	0.000000	1160	0.000223
1161	0.000000	1161	0.000138
1162	0.000000	1162	0.115224
1163	3.268113	1163	0.000000
1164	0.000000	1164	0.060124
1165	0.107716	1165	0.000000
1166	-0.000000	1166	0.000000
1167	-0.000000	1167	0.000000
1168	-0.000000	1168	0.000000
1169	0.000000	1169	0.228158
1170	0.000000	1170	2.048430
1171	0.000000	1171	2.909013
1172	38.355483	1172	0.000000
1173	0.000000	1173	0.000000
1174	0.000000	1174	0.000000
1175	2.423900	1175	0.000000
1176	0.000000	1176	-0.000000
1177	119.162644	1177	0.000000
1178	215.794484	1178	0.000000
1179	0.000000	1179	19.418940
1180	0.000000	1180	19.919238
1181	0.000000	1181	0.013816
1182	0.000000	1182	0.105415
1183	0.000000	1183	28.391490
1184	0.000000	1184	0.985147
1185	180.945965	1185	0.900147
1186	30.000000	1186	-0.002874
1187	0.000000	1187	0.511371
1188	0.199734	1188	0.000000
1100	0.100104	1100	

Coordenada	x Valor x	Coordenada z	Valor z
1189	0.800000	1189	0.000000
1190	0.000000	1190	3.283740
1191	0.000000	1191	14.338633
1192	0.000000	1192	8.762487
1193	0.000000	1193	39.266030
1194	0.423429	1194	0.000000
1195	0.015542	1195	0.000000
1196	0.004400	1196	0.000000
1197	0.514211	1197	0.000000
1198	0.000000	1198	0.000000
1199	0.000000	1199	0.000000
1200	71.037893	1200	0.000000
1201	216.434170	1201	0.000000
1202	16.177222	1202	0.000000
1203	120.961873	1203	0.000000
1204	0.000000	1204	0.000000
1205	47.043660	1205	0.000000
1206	317.685529	1206	0.000000
1207	0.982160	$\frac{1207}{1207}$	0.000000
1208	1.183759	1208	0.000000
1209	4.412582	1209	0.000000
1210	4.627134	1210	0.000000
1211	0.000000	1211	0.009738
1212	20.737337	1212	0.000000
1213	-0.000000	1213	0.000000
1214	1.379208	1214	0.000000
1215	3120.151950	1215	0.000000
1216	600.000018	1216	0.000000
1217	6.629355	1217	0.000000
1218	44.968659	1218	0.000000
1219	10.000000	1219	-0.520681
1220	2.165919	1220	0.000000
1221	0.000000	1221	5.011211
1222	0.000000	1222	5.011211
1223	-0.000000	1223	0.000000
1224	16.790130	1224	0.000000
1225	0.428400	1225	-4.459603
1226	0.100300	1226	-6.021543
1227	0.000000	1227	6.307696
1228	0.000000	1228	1.602132
1229	1.000000	1229	0.000000
1230	0.000000	1230	0.002608
1231	-0.000000	1231	0.000000
1232	-0.000000	1232	0.000000
1232	0.000000	1233	0.851483
1234	0.000000	1234	2.151115
1235	0.000000	1235	3.674821
1236	19.820474	1236	0.000000
1237	0.000000	1237	0.000000
	0.000000	1401	

Coordenada	x Valor x	Coordenada z	Valor z
1238	0.173720	1238	0.000000
1239	0.000000	1239	0.073516
1240	0.239100	1240	0.000000
1241	0.000000	1241	32.127162
1242	0.000000	1242	18.519092
1243	0.000000	1243	5.844456
1244	0.000000	1244	0.000779
1245	0.000000	1245	0.099897
1246	0.000000	1246	1.008519
1247	1.000000	1247	0.000000
1248	0.000000	1248	0.913595
1249	0.000000	1249	2.796550
1250	0.000000	1250	5.147538
1251	81.436854	1251	0.000000
1252	7.655064	1252	0.000000
1253	11.262729	1253	0.000000
1254	160.564238	1254	0.000000
1255	0.000000	1255	0.674262
1256	0.000000	1256	1.332328
1257	0.000000	1257	1.934285
1258	0.000000	1258	1.934285
1259	0.000000	1259	24.936755
1260	0.000000	1260	0.006317
1261	0.000000	1261	0.081888
1262	0.000000	1262	0.047164
1263	0.000000	1263	1.130652
1264	889.226297	1264	0.000000
1265	0.000000	1265	0.025679
1266	0.000000	1266	0.358443
1267	0.571735	1267	0.000000
1268	0.428265	1268	0.000000
1269	0.000000	1269	1.954598
1270	0.000000	1270	15.778344
1271	0.000000	1271	47.943550
1272	0.000000	1272	0.213939
1273	8.433740	1273	0.000000
1274	7.000000	1274	-0.601956
1275	2.000000	1275	-0.268875
1276	0.000000	1276	-11.140501
1277	0.000000	1277	1.260022
1278	0.000000	1278	0.601956
1279	9.658598	1279	0.000000
1280	4.408368	1280	0.000000
1281	11.492811	1281	-0.131064
1282	0.000000	1282	0.026056
1283	0.000000	1283	0.904679
1284	0.000000	1284	0.389167
1285	0.000000	1285	12.082307
1286	20.300415	1286	-1.939356

Coordenad	la x	Valor x	Coordenada z	Valor z
1287	9.	852566	1287	0.000000
1288	38	.510389	1288	0.000000
1289	19	.200891	1289	0.000000
1290	89	.392476	1290	0.000000
1291	230	0.190862	1291	0.000000
1292	458	8.107577	1292	0.000000
1293	865	2.965291	1293	0.000000
1294	734	4.624426	1294	0.000000
1295	193	3.597837	1295	0.000000
1296	231	1.472119	1296	0.000000
1297	540	0.974196	1297	0.000000
1298	189	9.368108	1298	0.000000
1299	30	.024353	1299	0.000000
1300	681	2.659384	1300	0.000000
1301	650	6.199951	1301	1.030431
1302	364	4.729189	1302	0.000000
1303	1102	44.318708	1303	0.000000
1304	1102	44.318708	1304	0.000000
1305	0.	000000	1305	0.000689
1306	0.	000000	1306	0.000142
1307	0.	000000	1307	0.000195
1308	1070	60.117190	1308	-0.000010
1309	368	2.160245	1309	0.000000
1310	0.	000000	1310	-0.000149
1311	0.	000000	1311	0.000131
1312	2170	61.996090	1312	-0.000370
1313	0.	000000	1313	0.000032
1314	470	12.394530	1314	-0.000081
1315	0.	000000	1315	0.000115
1316	0.	000000	1316	0.000057
1317	0.	000000	1317	0.000147
1318	299'	77.117088	1318	0.000000
1319	0.	000000	1319	0.000163
1320	0.	000000	1320	0.000286
1321	0.	000000	1321	0.000272
1322	0.	000000	1322	0.000547
1323	0.	000000	1323	0.000947
1324	0.	000000	1324	0.001037
1325	0.	000000	1325	0.000349
1326	0.	000000	1326	7.869770
1327	0.	000000	1327	7.928759
1328	0.	000000	1328	0.000411
1329	7.	263248	1329	0.000000
1330	0.	000000	1330	7.619830
1331	0.	000000	1331	0.146161
1332	0.	000000	1332	0.001711
1333	0.	000000	1333	0.001061
1334	0.	000000	1334	0.476605
1335	0.	000000	1335	0.045277

Coordenada	x Valor x	Coordenada z	Valor z
1336	0.000000	1336	0.158054
1337	0.000000	1337	5.278145
1338	-0.000000	1338	0.000000
1339	-0.000000	1339	0.000000
1340	0.000000	1340	4.239547
1341	0.000000	1341	0.599784
1342	0.000000	1342	5.384939
1343	0.000000	1343	7.647251
1344	0.000000	1344	0.000000
1345	0.000000	1345	0.000000
1346	0.000000	1346	0.000000
1347	625.799854	1347	0.000000
1348	0.000000	1348	0.000000
1349	0.000000	1349	0.000000
1350	0.000000	1350	0.000000
1351	0.000000	1351	19.491120
1352	0.000000	1352	19.982618
1353	0.000000	1353	0.018588
1354	0.000000	1354	0.130212
1355	0.000000	1355	25.783670
1356	0.000000	1356	1.216891
1357	0.000000	1357	0.008452
1358	0.000000	1358	0.003002
1359	0.000000	1359	3.575266
1360	0.000000	1360	0.279639
1361	0.000000	1361	0.976174
1362	0.000000	1362	13.891474
1363	0.000000	1363	10.418606
1364	0.000000	1364	6.366918
1365	0.000000	1365	43.933623
1366	0.000000	1366	3.704384
1367	0.000000	1367	19.563778
1368	0.000000	1368	27.782878
1369	0.000000	1369	0.580343
1370	46.581073	1370	0.000000
1371	142.720431	1371	0.000000
1372	0.000000	1372	0.000000
1373	0.000000	1373	0.000000
1374	0.000000	1374	0.000000
1375	191.864350	1375	0.000000
1376	0.000000	1376	0.000000

3 Variáveis Duais (Multiplicadores de Lagrange)

Tabela 2: Variáveis duais do problema perold

C11	X 7-1
Coordenada y	`
1	0.244099
2	0.299041
3	1.579092
4	0.216628
5	5.483165
6	0.005608
7	0.025616
8	0.800336
9	0.481419
10	69.841048
11	-0.000000
12	0.025679
13	-0.004437
14	-0.000000
15	-0.128496
16	3.306821
17	9.015936
18	8.465755
19	18.558173
20	-0.363274
21	2.068744
22	3.368009
23	-0.000000
24	-0.000000
25	170.155399
26	25.475775
27	-0.000000
28	-264.013347
29	-608.810854
30	-0.036506
31	-0.053529
32	-666.557884
33	-231.971245
34	-0.807127
35	-0.500544
36	-11.662905
37	-0.920212
38	-0.920212
39	-100.198836
39 40	-56.289990
40	-20.525189
41 42	-20.525189
42 43	
43 44	-12.190067
	-109.443934
45 46	-390.429869 -1.179722
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Coordenada y	Valor y
47	-0.289005
48	-0.641086
49	-0.401269
50	-1.407546
51	-1.077812
52	-0.360100
53	37.042544
54	30.259966
55	26.242999
56	30.259966
57	30.259966
58	354.250124
59	0.001578
60	0.001441
61	0.002715
62	0.001265
63	0.001200
64	0.002121
65	0.001206
66	0.001200 0.017495
67	0.017495 0.017495
68	0.017495 0.017495
69	-0.000000
70	
70 71	-0.000000 -0.000000
72	11.282693
73	2.203795
74	5.317714
75 76	9.078898
76 77	0.102670
77 - 3	0.154731
78	0.627237
79	0.099547
80	3.754393
81	0.005608
82	0.025616
83	0.383484
84	0.232887
85	69.841048
86	-0.000000
87	0.025679
88	-0.004437
89	-0.000000
90	-0.017994
91	0.776238
92	1.675508
93	1.422691
94	2.563565
95	-0.082159
Continua na próx	rima nágina

Canadanada	Valan
Coordenada	
96	0.611036
97	0.973286
98	-0.000000
99	-0.000000
100	10.006836
101	7.102941
102	-0.000000
103	-0.000000
104	-130.283743
105	-515.613222
106	-0.036506
107	-0.053529
108	-644.844300
109	-155.021679
110	-0.032718
111	-0.020290
112	-11.662905
113	-0.920212
114	-3.212310
115	-100.198836
116	-56.289990
117	-20.525189
118	-237.920865
119	-12.190067
120	-109.443934
121	-155.423350
122	-1.407847
123	-0.361257
124	-0.801358
125	-0.501586
126	-1.759433
127	-1.347265
128	-0.450125
129	10.154840
130	0.922155
131	1.655937
132	3.581045
133	10.103564
134	159.796759
135	0.001132
136	0.000682
137	0.001174
138	0.000767
139	0.001104
140	0.000813
141	0.000724
142	0.001104
143	0.001104
144	0.001104

Coordenada y	Valor y
145	-0.000000
146	-0.000000
147	-0.000000
148	0.733596
149	-0.000000
150	2.754744
151	-2.297776
152	6.647143
153	-4.973061
154	3.031372
155	0.069483
156	0.125584
157	0.350293
158	0.058844
159	4.347034
160	0.005608
161	0.016033
162	0.112783
163	0.071491
164	69.841048
165	-0.000000
166	0.025679
167	-0.004437
168	-0.000000
169	-0.009130
170	0.573260
171	1.179297
172	1.013895
173	1.622923
174	-0.015767
175	0.266764
176	0.305610
177	-0.000000
178	-0.000000
179	3.334557
180	0.761676
181	-0.000000
182	-0.000000
183	-44.096213
184	-30.099273
185	-0.024815
186	-0.024813
187	-52.772765
188	-52.772705 -78.072113
	-78.072113 -0.011575
189	
190	-0.007178
191	-3.735018
192	-0.292134
193	-1.019792
Continua na próx	ima nágina

Coordenada y	Valor y
194	-29.721363
195	-1.710061
196	-1.741836
197	-78.024353
198	-3.869904
199	-33.810047
200	-49.341276
201	-1.277075
202	-0.324420
203	-0.719645
204	-0.450441
205	-1.580027
206	-1.209887
207	-0.404227
208	3.211439
209	0.235452
210	1.471112
211	2.181967
212	2.176177
213	33.519811
214	0.001486
215	0.000734
216	0.001172
217	0.000821
218	0.001304
219	0.000968
220	0.000782
221	0.001161
222	0.001165
223	0.001165
224	-0.000143
225	-0.000000
226	-0.000000
227	0.798963
228	-0.000000
229	3.325954
230	-0.956897
231	8.739746
232	-3.176431
233	1.755860
234	0.176023
235	0.123536
236	0.330112
237	0.055578
238	4.404841
239	0.004588
240	0.016033
241	0.010033
242	0.053122 0.053035
	rima página

Coordenada y	Valor y
243	1.282800
244	-0.000000
245	0.025679
246	-0.003418
247	-0.000000
248	-0.005607
249	0.492575
250	1.029241
251	0.896031
252	1.309474
253	-0.005576
254	0.213920
255	0.234012
256	-0.655046
257	-2.934443
258	1.991901
$\frac{250}{259}$	0.393971
260	-0.000000
261	-0.000000
262	-28.494171
263	-30.099273
264	-0.013927
265	-0.013927 -0.053529
266	-0.055529
267	-1.388130
268	-0.007293
269	-0.007293
270	-0.004323
270 271	-0.169213
$\frac{271}{272}$	-0.109213
273	-17.094703
273 274	-0.000000
275	-0.000000
	-0.000000
276 277	
277 278	-2.241562 -20.125022
	-20.125022 -28.579915
279	
280	-0.815557
281 282	-0.207809
	-0.460972
283	-0.288532
284	-1.012094
285	-0.774999
286	-0.258929
287	2.501296
288	0.333056
289	1.179168
290	1.745773
291	1.587017
Continua na prós	rima párina

Coordenada y	Valor y
292	23.153779
293	0.001508
294	0.000735
295	0.001174
296	0.000829
297	0.001315
298	0.000985
299	0.000790
300	0.001164
301	0.001169
302	0.001169
303	-0.000152
304	-0.000000
305	-0.000000
306	0.805298
307	-0.000000
308	2.843846
309	-0.227340
310	7.384961
311	
312	-0.659376
	1.032637
313	0.378146
314	0.175023
315	0.357621
316	0.087212
317	6.490013
318	0.004588
319	0.007118
320	0.083122
321	0.053035
322	1.282800
323	-0.000000
324	0.025679
325	-0.003418
326	-0.000000
327	-0.004589
328	0.460930
329	1.003775
330	0.891335
331	1.122236
332	-0.004071
333	0.197680
334	0.196979
335	-3.754459
336	-0.602928
337	-0.344356
338	-0.013754
339	-0.000000
340	-0.000000
Continua na próx	ima nágina

Coordenada y	Valor y		
341	-18.591514		
342	-18.663843		
343	-0.008158		
344	-0.053529		
345	-20.707654		
346	-0.803801		
347	-0.003242		
348	-0.002010		
349	-1.272334		
350	-0.099515		
351	-0.347392		
352	-10.082927		
353	-0.000000		
354	-0.000000		
355	-10.752651		
356	-1.318283		
357	-11.835711		
358	-16.808111		
359	-0.214220		
360	-0.054494		
361	-0.120881		
362	-0.120001		
363	-0.265402		
364	-0.203402		
365	-0.267899		
366	2.306381		
367	0.423483		
368	0.930068		
369	1.432150		
370	1.482753		
371	21.969916		
372	0.000777		
373	0.000777		
374	0.000033 0.000914		
375	0.000914 0.000952		
376	0.000952 0.001070		
370 377	0.001070		
378	0.001029 0.000852		
379	0.000852 0.000921		
380	0.000921 0.000926		
381	0.000926		
382	-0.000149		
383	-0.000000		
384	-6.803364		
385	0.888519		
386	-0.000000		
387	1.957035		
388	0.186647		
389	4.867260		
Continua na próx	ima nácina		

Coordenada y	Valor y	
390	0.700911	
391	0.701872	
392	0.640804	
393	0.200264	
394	0.376592	
395	0.100951	
396	7.526640	
397	0.004588	
398	0.007088	
399	0.081888	
400	0.052299	
401	1.130652	
402	-0.000000	
403	0.025679	
404	-0.003418	
405	-0.073090	
406	-0.003762	
407	0.411594	
408	0.939877	
409	0.819248	
410	1.154605	
411	-0.003762	
412	0.194344	
413	0.198272	
414	-13.352414	
415	-9.958087	
416	1.514455	
417	0.077021	
418	-0.000000	
419	0.553670	
420	-10.736780	
421	-10.897229	
422	-0.004300	
423	-0.050332	
424	-13.222346	
425	-0.466562	
426	-0.002072	
427	-0.001285	
428	-0.864791	
429	-0.067640	
430	-0.236119	
431	-5.278145	
432	-0.000000	
433	-0.000000	
433 434	-4.239547	
434 435	-4.239347 -0.896022	
436 436	-0.896022 -8.044600	
430 437	-8.044600	
43 <i>t</i> 438	-0.000000	
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Coordenada y	Valor y
439	-0.000011
440	-0.000025
441	-0.000015
442	-0.000054
443	-0.000041
444	-0.000014
445	2.169268
446	0.646168
447	1.143700
448	1.667270
449	1.348934
450	15.182271
451	0.000418
452	0.000410 0.000925
453	0.000323 0.000792
453 454	0.000792
455	0.001014 0.000956
	0.000930 0.001049
456	
457	0.000883
458	0.000897
459	0.000899
460	0.000899
461	-0.000059
462	-0.000000
463	-10.171180
464	0.932377
465	-0.000000
466	1.081830
467	0.283833
468	2.596271
469	0.932339
470	0.648544
471	0.668880
472	0.201299
473	0.383593
474	0.100600
475	7.560526
476	0.004113
477	0.006559
478	0.081888
479	0.047164
480	1.130652
481	-0.000000
482	0.025679
483	-0.003064
484	-0.033473
485	-0.002594
486	0.293680
487	0.776266
TU1	

Coordenada y	Valor y		
488	0.675724		
489	1.012246		
490	-0.002819		
491	0.167137		
492	0.191032		
493	-21.615519		
494	-0.000000		
495	2.526674		
496	0.468528		
497	-0.000000		
498	2.921415		
499	-7.869770		
500	-7.983800		
501	-0.001462		
502	-0.030364		
503	-10.605276		
504	-0.299034		
505	-0.001934		
506	-0.001199		
507	-0.591828		
508	-0.045277		
509	-0.218178		
510	-5.278145		
511	-0.000000		
512	-0.000000		
513	-4.239547		
514	-0.827942		
515	-7.433369		
516	-10.556265		
517	-0.000000		
518	-0.000000		
519	-0.000000		
520	-0.000000		
521	0.000000		
522	-0.000000		
523	-0.000000		
524	2.084043		
525	0.677526		
526	1.081829		
527	1.565920		
528	1.565920		
529	12.949880		
530	0.000415		
531	0.000927		
532	0.000792		
533	0.001018		
534	0.001010		
535	0.001053		
536	0.000886		
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Coordenada y	Valor y
537	0.000900
538	0.000902
539	0.000902
540	-0.000053
541	-0.000000
542	-10.245253
543	0.934945
544	-0.000000
545	0.342615
546	0.342013 0.465122
547	0.403122 0.922959
548	0.922939 0.934945
549	0.934943 0.469823
550	0.607959
551	0.201103
552	0.395717
553	0.103297
554	7.424774
555	0.003895
556	0.006317
557	0.081888
558	0.047164
559	1.130652
560	-0.000000
561	0.025679
562	-0.002902
563	-0.599162
564	-0.000990
565	0.112037
566	0.211637
567	0.073516
568	0.774739
569	-0.002819
570	0.167137
571	0.146990
572	-13.332431
573	-74.069981
574	8.241905
57 5	1.563725
576	-0.000000
577	1.738021
578 570	-7.869770 7.028750
579	-7.928759
580	-0.000411
581	-0.000000
582	-7.619830
583	-0.146161
- .	0 0 - 1 1
584 585	-0.001711 -0.001061

Coordenada y	Valor y	
586	-0.476605	
587	-0.045277	
588	-0.158054	
589	-5.278145	
590	-0.000000	
591	-0.000000	
592	-4.239547	
593	-0.599784	
594	-5.384939	
595	-7.647251	
596	-0.000000	
597	-0.000000	
598	-0.000000	
599	-0.000000	
600	-0.000000	
601	-0.000000	
602	-0.000000	
603	3.325145	
604	0.674262	
605	1.332328	
606	1.934285	
607	1.934285	
608	24.936755	
609	0.000417	
610	0.000916	
611	0.000791	
612	0.001004	
613	0.000947	
614	0.001037	
615	0.000875	
616	0.000888	
617	0.000890	
618	0.000890	
619	-0.000059	
620	-0.000000	
621	-9.990070	
622	0.922959	
623	-0.000000	
624	0.342615	
625	0.922959	

4 Observações

- O solver HiGHS foi configurado com o método IPM (Interior Point Method).
- Este arquivo contém a solução detalhada para o problema perold.
- As variáveis duais representam os multiplicadores de Lagrange das restrições.
- Os custos reduzidos (z) indicam o impacto de forçar variáveis não-básicas na base.