

Karmarkar Karp	Standard Repeated Random	Standard Solution Hill Climbing
62370	296405992	780909614
68009	65108289	283480383
987792	91665378	452551506
89950	139699972	35640166
525559	201182293	435548653
77947	387820383	421493147
720268	43326140	361526854
251154	68318830	520480418
747751	361581111	580663575
64990	158335910	618083262
133837	104699139	699928321
21001	27429177	108971341
688750	179688914	46114728
900549	175478587	223360621
258513	755391119	61381143
453304	90180586	303287530
452172	387656926	22908934
51101	257292775	14554469
57203	165883473	57511837
205514	261183154	215257612
31631	271420231	148737379
170700	428438916	577505604
141701	653592595	67948313
304445	218484567	505146851
21092	105295278	18694350
193683	172516787	268042541
340483	288070677	143016793
6815	404901843	445205029
115747	98030339	1403793757
88033	420753901	105481511
16500	86366440	470144322
57889	939394947	465468521
13707	334858063	726422885
94404	164560648	419269592
9096	339211592	346350548
69413	457063471	63462763
122610	124197786	595008710
2807	377599545	1277906515
70423	51978747	582028943
27307	81033931	577341939
151002	131792092	775959396

539726	693687694	205984260
39572	342377990	424126734
119425	508769	212609545
22173	16112273	86245685
29050	444101708	208561248
187078	270888742	1011457830
116168	500572054	162383166
21307	171297705	87241381
76188	28148998	8056392

200358.18

256711729.5

372665132.3

Standard Solution Simulated Annealing Prepartitioning Repeated Random

86840028	170
121248535	53
15443704	100
36836022	708
486715607	3
587974455	189
1215303270	378
692041300	90
188210631	103
485746572	28
395904425	79
39733829	139
149764732	40
458500637	55
399182121	135
28253402	356
285200480	84
642787641	147
79982805	7
3417482	58
138619427	137
418702182	460
35236331	243
127418901	19
590806972	4
241357415	337
64407861	25
301141447	15
65430469	41
300642541	461
115396546	366
769360053	107
630071633	309
94429000	52
282224832	96
101478763	101
79260442	170
79742201	313
137352897	1107
187239953	27
12164740	338

158310930	12
7554288	358
1170803	431
149558139	25
61041816	344
275530300	154
491697644	4
638947227	183
400809694	70

267123862.5	184.62
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Prepartitioning Hill Climbing	Prepartitioning Simulated Annealing
52	358
99	7
350	2
3074	102
223	291
1305	33
176	228
518	128
327	197
588	34
141	323
427	163
486	16
161	93
1189	75
342	12
1348	1242
253	79
205	13
44	610
1623	69
1340	60
797	1011
663	253
618	20
1517	37
307	15
1095	73
87	233
33	275
882	170
451	29
221	363
134	200
1492	70
749	745
136	2
393	51
1843	13
213	19
964	74

154	46
16	226
69	567
31	61
1062	138
98	444
170	278
2261	39
644	318

627.42	198.1
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Karmakar Karp Times	Standard Repeated Random Times	Standard Hill Climbing Times
7	308	44
1	201	12
1	259	14
0	341	11
2	200	11
0	206	10
1	208	12
0	213	12
0	215	13
0	199	12
0	198	10
0	186	10
0	191	10
1	188	10
0	185	10
0	191	11
0	207	11
0	205	12
0	200	15
1	199	13
0	194	11
0	197	12
0	207	11
0	205	13
0	218	15
0	205	13
1	218	10
0	205	11
0	199	12
0	203	11
0	193	11
0	206	11
1	218	10
0	198	10
0	189	10
0	184	10
0	197	14
0	195	12
1	215	10
0	217	11
0	209	12

0	202	11
0	206	11
0	198	14
0	196	10
1	189	12
0	195	15
0	192	11
0	187	10
1	201	11

0.38

206.76

12.16



Standard Simulated Annealing Times	Prepartitioning Repeated Random Times
27	627
24	593
27	575
30	550
30	524
30	553
23	540
21	528
20	500
20	512
21	524
21	499
21	506
22	544
22	558
23	548
22	525
23	521
21	556
20	595
26	551
26	545
22	551
24	541
22	513
21	551
22	543
23	505
27	568
21	543
21	533
23	567
25	520
23	528
22	566
22	537
22	541
23	532
25	521
24	562
20	574

23	539
21	554
26	590
21	565
28	525
25	508
21	513
20	589
21	587

23.16	544.8
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Prepartitioning Hill Climbing Times    Prepartitioning Simulated Annealing Times

306	321
335	344
299	323
303	305
305	305
293	308
305	301
288	291
300	301
298	296
296	321
299	316
281	299
288	289
283	306
295	320
293	335
310	321
287	299
284	307
279	296
264	295
290	293
290	312
289	318
297	312
299	324
276	323
316	334
286	317
316	322
283	346
294	318
315	329
320	344
295	322
300	314
298	317
290	306
293	301
274	293

313	323
317	338
313	320
318	291
348	297
326	298
295	302
277	300
282	295

298.02

312.16