

UCS

Heuristic: UCS				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	271.62	148	8180	13.4
test2	1632.3	210	19494	15.1
test3	1614.38	227	19098	17.5
test4	1614.4	220	19286	16.4
test5	12.029	1	2	15.6
test6	1409.11	244	18004	14.5
test7	1455.52	232	19098	15.1
test8	1210.585	88	16483	16.5
test9	1065.239	220	15843	14.2
test10	1567.325	272	19592	15.2
test11	1531.47	243	19135	17.8
test12	30.604	16	1292	17.1
test13	1006.81	130	15578	18.1
test14	1025.675	178	15359	14.7
test15	13.87	2	26	14.9
test16	15.79	10	279	15.6
test17	627.79	172	12139	17.1
test18	1208.175	138	17086	15.1
test19	1332.17	210	18568	13.7
test20	1125.27	203	16065	18.2
test21	1347.96	159	17114	15.5
test22	957.554	150	14937	15.4
test23	18.624	13	494	15.3
test24	296.434	123	8048	15
test25	13.975	7	114	13.6
test26	1208.38	173	16582	18.2
test27	1530.46	220	18709	15.3
test28	1172.77	138	16640	18.6
test29	1115.225	188	16178	17.8

UCS

test30	1397.97	182	18102	15
test31	1067.155	217	15722	13.9
test32	71.39	96	3369	15.1
test33	18.424	10	377	13.4
test34	19.85	15	442	13.3
test35	1493.925	243	18497	15.1
test36	1485.639	259	18911	14.7
test37	1203.435	147	16339	13.9
test38	1232.36	169	15682	14.3
test39	1643.625	254	19539	16.4
test40	1145.68	185	16579	14.6
test41	1476.265	177	18215	15.3
test42	46.72	22	2510	14.3
test43	931.245	121	14402	15.9
test44	717.105	159	12306	19
test45	1497.24	169	18803	15
test46	12.73	4	106	15.3
test47	779.565	152	12795	13.3
test48	1208.645	162	16905	15
test49	1644.28	225	19027	15.7
test50	11.375	7	83	14.4
Avg Run-Time	930.72274			
Avg Path Length	146.2			
Avg # Nodes Expanded	12762.68			
Avg Memory Usage	15.468			

Euclidean

Heuristic: Euclidean				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	18.389	142	497	13.4
test2	66.425	203	3406	15.2
test3	98.365	212	4280	15.2
test4	124.169	5355	179	15.2
test5	12.82	1	2	15.5
test6	35.71	203	2217	15.3
test7	236.385	225	7054	12.1
test8	36.929	88	1281	11.4
test9	50.764	201	2393	10.5
test10	96.069	209	3751	11.6
test11	69.354	178	3031	12.3
test12	21.9	16	61	11.3
test13	116.814	123	4616	13.1
test14	102.685	173	4225	13.2
test15	22.104	2	4	11.5
test16	21.895	6	12	11.4
test17	31.434	87	1379	12.3
test18	66.289	137	3078	12.2
test19	84.08	158	3561	12.6
test20	36.79	155	1627	11.5
test21	70.88	153	3188	12.3
test22	79.135	94	3136	12.2
test23	21.609	13	106	8.2
test24	39.575	106	875	8.7
test25	21.64	7	9	6.3
test26	56.645	152	2164	6.9
test27	123.105	191	3756	6.5
test28	32.5	84	951	6.5
test29	86.599	137	2993	7.6

Euclidean

test30	39.215	134	1372	7.2
test31	41.54	193	1492	7.7
test32	22.612	95	269	7.2
test33	20.964	10	22	7
test34	20.35	11	39	8.4
test35	60.63	157	2219	7.5
test36	84.74	140	3173	7.1
test37	50.975	99	1844	7.2
test38	34.455	131	1241	9.1
test39	115.14	199	3958	7
test40	75.71	135	2792	7
test41	56.815	136	2243	8
test42	23.01	20	429	7.2
test43	48.88	92	1615	7.5
test44	89.305	109	2993	6.7
test45	75.385	139	2773	9.2
test46	18.495	4	8	6.9
test47	1531	136	1531	7.5
test48	40.17	147	1301	6.9
test49	137.4	180	4426	7.7
test50	20.98	7	11	6.9
Avg Run-Time	89.77658			
Avg Path Length	221.7			
Avg # Nodes Expanded	1991.66			
Avg Memory Usage	9.778			

Manhattan

Heuristic: Manhattan				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	36.639	142	1548	11.4
test2	19.165	153	362	11.8
test3	34.759	163	1912	12
test4	20.604	971	164	12.1
test5	13.725	1	2	11.3
test6	16.565	171	498	12
test7	19.554	167	868	12
test8	17.929	87	797	11.9
test9	15.829	160	391	11.8
test10	11.859	155	527	11.2
test11	16.445	177	474	11.8
test12	13.294	16	24	11.4
test13	56.29	95	3019	11.9
test14	90.424	140	4364	12.7
test15	13.92	2	4	11.4
test16	13.305	6	11	11.3
test17	24.309	86	851	11.6
test18	43.239	94	2604	11.3
test19	24.664	163	1033	11.8
test20	41.804	157	2254	11.2
test21	69.684	138	3549	11.8
test22	38.845	94	2093	11
test23	15.695	13	78	11
test24	19.8	104	915	12
test25	14.115	7	9	11
test26	41.854	151	2355	12
test27	35.345	171	1902	11.2
test28	15.005	84	489	11.4
test29	36.285	134	2121	12.4

Manhattan

test30	18.47	834	870	11.7
test31	20.445	153	817	11.7
test32	14.535	95	228	11.3
test33	13.205	10	18	11
test34	14.515	11	36	9.7
test35	18.78	156	757	11.6
test36	53.219	142	3039	12.9
test37	20.689	99	1067	10.4
test38	21.835	131	1248	10.5
test39	16.785	146	489	10.2
test40	76.399	142	3981	10.8
test41	21.629	128	1181	10.5
test42	14.5	14	207	9.8
test43	18.955	94	882	10.3
test44	33.169	109	1728	10.1
test45	25.825	139	1520	10.8
test46	14.415	4	10	9.7
test47	42.657	137	2517	10.2
test48	19.919	152	1422	9.7
test49	15.025	147	184	10
test50	8.045	7	10	10.4
Avg Run-Time	26.67932			
Avg Path Length	137.04			
Avg # Nodes Expanded	1148.58			
Avg Memory Usage	11.22			

Akritean

Heuristic: Akritean				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	55.93	142	1950	7.5
test2	22.304	151	281	6.9
test3	38.305	167	1499	7.6
test4	27.45	161	696	6.6
test5	20.125	1	2	6.7
test6	24.21	166	373	7.1
test7	28.805	180	914	6.8
test8	24.47	89	497	7.1
test9	25.115	161	392	7.1
test10	24.96	166	427	7.1
test11	23.45	175	404	7
test12	20.415	16	24	6.7
test13	43.92	96	1491	8.9
test14	68.77	138	2797	7.5
test15	22.01	2	4	6.9
test16	19.154	6	11	6.8
test17	24.31	87	503	7.1
test18	48.435	86	2298	8.1
test19	23.67	162	495	7.1
test20	43.51	156	1409	7
test21	73.175	136	2865	6.9
test22	35.855	95	1341	7.5
test23	21.485	13	67	6.9
test24	31.269	104	792	6.8
test25	22.34	7	9	6.9
test26	47.705	151	1971	7.7
test27	66.83	176	2461	7.4
test28	18.765	86	275	7.4
test29	48.85	135	1970	9.3

Akritean

test30	31.66	134	785	6.9
test31	33.775	157	957	7.4
test32	21.665	95	218	6.9
test33	20.645	10	18	6.8
test34	21.795	11	23	6.8
test35	25.24	152	609	7.1
test36	76.845	141	3068	6.9
test37	22.26	98	576	7.2
test38	31.62	132	1132	7.4
test39	27.92	154	420	7.2
test40	77.56	144	3147	7.1
test41	24.55	128	607	7.1
test42	21.879	15	56	6.9
test43	26.845	94	783	7.2
test44	37.695	110	1193	6.8
test45	35.32	139	1376	7.5
test46	22.26	4	7	6.8
test47	68.67	131	2461	7.3
test48	36.895	149	1147	7
test49	31.005	151	188	8.5
test50	20.605	7	12	6.9
Avg Run-Time	34.24602			
Avg Path Length	107.34			
Avg # Nodes Expanded	940.02			
Avg Memory Usage	7.202			

Chebyshev

Heuristic: Chebyshev				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	224.192	144	541	6.7
test2	368.248	188	6090	7
test3	940.498	224	9601	8.3
test4	1664.002	195	13306	8.1
test5	21.203	2	3	7.2
test6	925.38	208	9791	9
test7	755.409	231	9130	8.2
test8	65.1	88	2034	7.9
test9	568.029	199	7739	7.5
test10	1026.13	212	10337	8.6
test11	556.034	225	7293	7.5
test12	21.923	16	115	7.1
test13	305.295	90	5543	7.9
test14	181.199	173	4042	6.9
test15	21.922	2	8	6.4
test16	21.88	6	12	6.3
test17	54.834	87	1681	6.4
test18	318.672	113	5967	7.4
test19	795..293	188	9386	7.5
test20	67.005	155	2033	7.3
test21	144.018	158	3475	7.1
test22	417.067	145	6042	7.5
test23	23.503	13	130	6.5
test24	28.42	113	743	6.5
test25	14.293	7	10	6.6
test26	277.753	153	4877	7.6
test27	875.53	214	9285	7.6
test28	43.022	84	1398	7
test29	95.912	149	2537	6.8

Chebyshev

test30	58.322	134	1884	7.2
test31	535.498	203	7209	6.7
test32	24.309	95	269	6.6
test33	14.02	10	37	6.7
test34	23.2	12	48	6.4
test35	566.45	156	7487	6.6
test36	401.668	140	6171	7.7
test37	88.233	99	2523	7.4
test38	66.357	131	1988	6.6
test39	1375.12	196	12000	8.5
test40	138.12	165	3313	6.6
test41	180.999	138	3706	6.7
test42	23.48	19	541	6.4
test43	91.029	92	2461	6.7
test44	321.056	136	5269	6.9
test45	238.1	164	4530	7.7
test46	14.23	4	7	6.7
test47	54.07	137	1745	7.1
test48	61.6	148	1867	7.2
test49	1026.264	188	10222	7.7
test50	21.1	7	15	6.5
Avg Run-Time	313.2591429			
Avg Path Length	123.12			
Avg # Nodes Expanded	4128.82			
Avg Memory Usage	7.18			

exHeuristic

Heuristic: Example Heuristic from Assignment PDF				
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	37.72	142	879	7.6
test2	45.73	183	1312	7
test3	63.62	167	2308	63.62
test4	151.35	177	4876	7.2
test5	18.885	1	2	7
test6	6.9	176	1231	6.9
test7	242.215	210	6170	7.2
test8	29.074	88	931	7.4
test9	111.05	197	3544	7.3
test10	42.28	168	1087	6.9
test11	77.5	185	2835	7.1
test12	20.39	16	44	6.8
test13	118.07	90	3675	7.7
test14	193.04	173	5626	7.4
test15	21.09	2	4	7
test16	18.97	6	13	6.9
test17	30.7	87	916	7.3
test18	105.97	124	4083	8
test19	41.05	176	1639	7.7
test20	46.615	155	1842	7.7
test21	107.35	145	3487	7.7
test22	84.755	94	3124	7
test23	20.625	13	97	6.8
test24	31.0799	104	1145	6.8
test25	21.435	9	7	6.9
test26	45.76	150	1877	7.7
test27	53.55	175	1985	53.55
test28	26.74	84	750	7.3
test29	68.28	135	2351	7.3

exHeuristic

test30	30.94	134	766	6.9
test31	42.765	162	1533	7.7
test32	21.74	95	242	7
test33	20.565	10	15	6.8
test34	21.715	14	97	7
test35	69.53	153	2433	7.6
test36	49.315	141	2085	7.8
test37	39.43	99	1444	7.5
test38	44.289	131	1541	7
test39	79.22	184	2950	7.9
test40	125.535	145	4164	7.6
test41	47.115	129	1400	7
test42	21.21	19	441	7.1
test43	36.335	92	1318	7.5
test44	34.28	112	1535	8.1
test45	40.979	140	2070	8
test46	15.245	4	9	6.7
test47	43.705	139	1932	7.1
test48	22.975	146	876	7.3
test49	89.464	160	3939	8
test50	16.31	7	11	6.9
Avg Run-Time	55.889118			
Avg Path Length	112.96			
Avg # Nodes Expanded	1772.82			
Avg Memory Usage	9.3454			

wA1 - euclidean

Heuristic: Euclidean	Weight = 1.25			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	26.2	142	263	6.3
test2	25.003	143	396	6.6
test3	106.2	169	2836	7
test4	23.142	145	241	6.6
test5	14.15	1	2	6.6
test6	23.3	160	307	6.4
test7	27.389	159	639	6.5
test8	20.028	87	111	6.2
test9	23.3	143	331	6.5
test10	22.004	150	183	6.3
test11	26.15	166	549	6.5
test12	14	16	18	6.6
test13	53.32	91	1528	6.3
test14	35.008	143	1094	6.2
test15	13.117	2	4	6.6
test16	13.51	6	9	6.6
test17	21.2	87	226	6.3
test18	57.114	95	1810	6.5
test19	56.29	163	1541	6.5
test20	28.493	155	709	6.5
test21	30.387	138	857	6.6
test22	28.13	94	587	6.6
test23	15.92	13	63	6.2
test24	23.999	104	143	6.4
test25	21.199	7	9	6.2
test26	32.83	150	554	6.4
test27	25.292	156	436	6.6
test28	21.004	84	109	6.2
test29	21.999	134	6.3	6.3

wA1 - euclidean

test30	22.004	134	140	6.5
test31	23.995	140	407	6.4
test32	20.994	95	140	6.3
test33	13	10	12	6.6
test34	23	11	30	6.4
test35	23.995	144	332	6.4
test36	23	140	357	6.4
test37	20	98	109	6.3
test38	20.999	131	144	6.3
test39	43.005	180	1151	6.3
test40	33	149	925	6.8
test41	21	128	133	6.3
test42	21.005	19	399	6.3
test43	21	92	102	6.3
test44	24.23	109	550	6.4
test45	20.004	139	166	6.3
test46	20.995	4	7	6.4
test47	24.995	129	472	6.5
test48	21.999	147	173	6.4
test49	25	156	384	6.6
test50	21.005	7	11	6.4
Avg Run-Time	26.75806			
Avg Path Length	105.3			
Avg # Nodes Expanded	434.106			
Avg Memory Usage	6.434			

wA1 - manhattan

Heuristic: Manhattan	Weight = 1.25			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	16.075	142	608	12.3
test2	16.495	141	215	10.2
test3	19.6	163	798	10.5
test4	16.155	159	371	10.3
test5	7.87	1	2	10.5
test6	14.78	167	228	10.2
test7	16.365	169	249	9.9
test8	10.979	87	160	10.2
test9	8.875	145	200	10.9
test10	14.675	156	198	10.2
test11	14.92	174	223	10.2
test12	13.705	16	21	9.9
test13	16.465	92	672	10.3
test14	19.925	138	1037	10.6
test15	13.525	2	4	9.9
test16	14.7	6	10	9.9
test17	14.325	86	195	10.1
test18	19.565	85	1174	10.6
test19	14.365	159	220	10.2
test20	18.72	156	592	10.4
test21	17.115	136	684	10.4
test22	14.609	94	307	10.2
test23	13.43	13	51	9.9
test24	14.685	104	160	10.1
test25	13.29	7	9	9.9
test26	17.579	151	791	10.5
test27	26.985	179	1437	11
test28	13.93	84	116	10.1
test29	15.009	136	187	10.2

wA1 - manhattan

test30	14.115	134	180	10.2
test31	17.02	156	561	10.4
test32	14.159	95	163	10.1
test33	15.169	10	14	9.9
test34	13.355	11	23	9.9
test35	16.8	152	515	10.4
test36	27.17	140	1833	10
test37	13.925	98	151	10.1
test38	14.445	132	214	10.2
test39	14.815	153	191	10.2
test40	23.409	145	1340	10.9
test41	14.23	128	171	10.2
test42	13.53	15	71	13
test43	15.505	94	180	10.1
test44	15.305	111	444	10.3
test45	14.445	139	242	10.2
test46	13.26	4	7	9.9
test47	15.805	129	470	10.3
test48	14.149	149	204	10.2
test49	14.175	145	155	10.2
test50	14.225	7	10	9.9
Avg Run-Time	15.55454			
Avg Path Length	105.9			
Avg # Nodes Expanded	361.16			
Avg Memory Usage	10.324			

wA1 - akritean

Heuristic: Akritean	Weight = 1.25			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	24.564	143	1001	7
test2	18.24	142	209	6.3
test3	21.345	167	768	7.3
test4	19.49	161	379	7.2
test5	15.53	1	2	6.8
test6	16.04	164	218	7
test7	16.889	168	234	7
test8	16.294	89	240	7.1
test9	15.985	146	202	7
test10	15.935	165	214	7
test11	18.925	175	203	7.1
test12	17.1	16	27	6.9
test13	18.385	93	534	6.8
test14	28.47	143	1372	7.5
test15	15.625	2	4	6.9
test16	14.0449	6	11	6.9
test17	17.095	86	195	7
test18	27.63	86	1255	6.9
test19	14.994	163	194	7.1
test20	20.595	156	694	7.3
test21	19.215	136	690	7.2
test22	16.27	95	306	7
test23	15.105	13	64	6.8
test24	17.055	104	227	7
test25	15.53	7	9	6.8
test26	19.305	151	639	7.1
test27	28.285	177	1099	6.9
test28	16.1	86	136	7.1
test29	15.35	135	220	7.1

wA1 - akritean

test30	16.345	134	182	7.1
test31	17.954	157	540	7.1
test32	16.605	95	166	7.1
test33	15.245	10	15	7
test34	13.82	11	22	6.9
test35	17.389	151	329	7.2
test36	30.25	140	1457	7
test37	16.12	98	158	7.1
test38	15.495	132	232	6.3
test39	15.815	148	157	7
test40	23.93	143	990	6.9
test41	15.48	128	160	7.1
test42	16.45	14	17	7
test43	14.87	94	215	7.1
test44	17.775	110	382	7.2
test45	16.12	139	269	7
test46	15.4	4	6	6.8
test47	18.415	129	650	7.3
test48	18.055	149	222	7.2
test49	18.89	153	175	6.3
test50	15.119	7	12	6.8
Avg Run-Time	18.018658			
Avg Path Length	106.44			
Avg # Nodes Expanded	354.04			
Avg Memory Usage	6.992			

wA1 - chebyshev

Heuristic: Chebyshev	Weight = 1.25			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	18.955	144	272	11.2
test2	121.61	174	5043	11.6
test3	306.089	171	8079	11.7
test4	352.895	190	9028	12.5
test5	13.525	1	2	9.9
test6	196.815	161	6496	10.6
test7	178.115	176	6420	10.8
test8	15.505	87	100	10
test9	127.459	142	5395	9.7
test10	98.015	159	4425	12.6
test11	185.535	182	6245	12.5
test12	14.964	16	19	9.8
test13	17.405	90	655	10.2
test14	33.98	167	1934	11.1
test15	13.525	2	4	9.8
test16	13.53	6	8	9.7
test17	14.929	87	356	10
test18	38.534	89	2436	11.2
test19	101.785	171	4634	12.7
test20	17.48	155	676	10.4
test21	18.92	139	684	10.3
test22	21.285	96	1076	10.5
test23	13.435	13	95	9.8
test24	14.315	104	182	10
test25	14.905	7	9	9.8
test26	15.685	150	373	10.2
test27	121.569	191	4902	11.7
test28	14.679	84	108	10.1
test29	15.735	134	441	10.2

wA1 - chebyshev

test30	14.06	134	146	10.1
test31	203.905	185	6534	11.2
test32	15.005	95	132	10.2
test33	13.495	10	17	9.8
test34	13.815	12	35	9.8
test35	201.62	157	6658	10.8
test36	15.725	142	3376	10.4
test37	14.3	98	127	10
test38	19.839	132	929	10.6
test39	277.855	162	7702	11.5
test40	16.74	146	487	10.4
test41	14.935	128	187	10.1
test42	14.955	19	412	10
test43	14.82	92	185	10.1
test44	26.429	109	1427	10.8
test45	14.649	139	181	10.2
test46	13.955	4	6	9.8
test47	10.1	133	534	11
test48	17.319	146	573	10.4
test49	204.219	150	6588	10.8
test50	13.785	7	11	10
Avg Run-Time	65.65406			
Avg Path Length	109.76			
Avg # Nodes Expanded	2126.88			
Avg Memory Usage	10.572			

wA1 - exHeuristic

Heuristic: Example Heuristic from Assignment PDF			Weight = 1.25	
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	30.145	142	1102	7
test2	27.23	160	1032	7.2
test3	27.92	151	1048	6.8
test4	20.65	155	578	6.5
test5	15.82	1	2	6.7
test6	18.3	155	329	6.9
test7	26.625	154	974	6.9
test8	18.245	87	156	7
test9	19.2	144	661	7
test10	19.195	147	164	6.9
test11	17.93	158	315	6.9
test12	17.005	16	18	6.7
test13	20.56	92	780	7.2
test14	31.72	139	1480	6.9
test15	14.74	2	4	6.8
test16	17.745	6	9	6.8
test17	15.205	86	133	6.9
test18	21.9	91	1014	7.3
test19	21.63	164	858	6.7
test20	17.725	155	524	6.8
test21	20.705	138	766	7.2
test22	18.915	94	498	7.1
test23	15.92	13	57	6.9
test24	15.01	104	141	7
test25	15.805	7	9	6.9
test26	26.13	151	1093	7
test27	17.435	156	325	7.1
test28	16.93	84	108	6.8
test29	16.52	134	155	7

wA1 - exHeuristic

test30	16.315	134	179	6.9
test31	19.985	141	487	7.2
test32	16.285	95	165	6.9
test33	15.635	10	14	6.9
test34	14.955	11	26	6.9
test35	19.865	140	271	7.8
test36	31.05	139	1482	7.1
test37	16.895	98	158	7
test38	18.74	132	203	6.9
test39	21.13	143	454	7.2
test40	28.28	145	1032	6.8
test41	15.585	128	165	7
test42	17.225	19	331	7
test43	18.1	92	172	7
test44	17.86	109	452	8.5
test45	15.71	139	239	7.1
test46	16.27	4	6	6.9
test47	20.595	129	430	6.7
test48	17.09	146	174	7
test49	18.795	146	562	7.1
test50	14.755	7	10	6.9
Avg Run-Time	19.4796			
Avg Path Length	103.86			
Avg # Nodes Expanded	426.9			
Avg Memory Usage	6.994			

wA2 - euclidean

Heuristic: Euclidean	Weight = 2			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	17.32	142	151	7.1
test2	16.569	135	142	6.8
test3	16.775	148	161	7
test4	17.445	143	147	6.8
test5	15.2	1	2	6.7
test6	16.16	147	152	6.8
test7	16.305	148	156	7
test8	17.21	88	93	6.7
test9	16.07	140	147	6.8
test10	16.05	150	160	6.8
test11	17.15	159	169	7
test12	17.36	16	18	6.2
test13	16.11	90	93	6.8
test14	16.665	139	150	6.8
test15	15.505	2	4	7.1
test16	15.259	6	8	6.8
test17	15.64	86	90	6.9
test18	14.43	86	98	6.9
test19	17.505	141	163	7
test20	17.705	155	164	7
test21	15.635	136	146	6.8
test22	15.46	94	99	6.8
test23	15.025	13	22	6.7
test24	15.54	104	111	6.8
test25	15.485	7	9	6.8
test26	18.46	150	158	6.1
test27	16.41	154	176	6.9
test28	16.145	85	88	6.8
test29	15.675	134	143	6.8

wA2 - euclidean

test30	15.67	134	137	6.8
test31	15.999	142	144	7
test32	15.12	95	101	6.8
test33	17.715	10	12	6.2
test34	16.509	11	18	6.9
test35	15.645	136	145	7
test36	15.83	139	167	7
test37	15.29	98	103	6.8
test38	15.59	131	134	6.8
test39	15.716	139	146	6.9
test40	17.25	141	162	6.9
test41	15.915	128	131	7
test42	15.54	14	19	6.9
test43	14.355	92	97	6.9
test44	17.16	109	118	7
test45	10.83	139	143	9.1
test46	14.02	4	6	6.8
test47	16.19	129	137	7
test48	17.82	147	154	6.9
test49	15.92	138	143	6.9
test50	15.59	7	9	6.9
Avg Run-Time	16.03884			
Avg Path Length	101.64			
Avg # Nodes Expanded	108.92			
Avg Memory Usage	6.88			

wA2 - manhattan

Heuristic: Manhattan	Weight = 2			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	17.84	142	184	7.2
test2	15.92	142	150	7.5
test3	17.035	160	193	7.3
test4	16.964	155	163	6.8
test5	14.75	1	2	6.7
test6	16.465	161	172	7
test7	16.835	166	177	6.9
test8	23.215	87	101	8.3
test9	17.335	142	150	7
test10	16.325	155	160	7
test11	20.175	169	174	6.9
test12	17.15	16	21	6.1
test13	16.664	92	113	7
test14	14.85	138	163	7
test15	14.83	2	4	7
test16	18.495	6	8	6.2
test17	16.28	86	100	6.9
test18	14.65	85	108	6.9
test19	17.25	148	154	5.9
test20	16.505	156	184	7
test21	16.23	137	169	6.8
test22	16.755	94	109	7.2
test23	13.975	13	30	6.8
test24	16.639	104	111	6.1
test25	15.85	7	9	6.8
test26	14.95	151	167	7
test27	17.06	176	212	6.5
test28	15.405	84	90	6.8
test29	15.62	135	144	6.9

wA2 - manhattan

test30	15.98	134	137	7
test31	15.63	155	170	6.9
test32	15.45	95	109	6.8
test33	15.06	10	12	6.7
test34	16.445	11	16	6.7
test35	14.52	147	167	7.7
test36	17.03	140	193	7
test37	14.29	98	107	6.9
test38	16.07	132	144	7
test39	16.79	148	150	7
test40	16.99	142	154	6.9
test41	17.08	128	133	8.5
test42	14.225	14	16	6.9
test43	16.09	94	108	7.1
test44	15.37	111	128	6.8
test45	17.24	139	157	6.9
test46	15.33	129	153	6.9
test47	18.85	129	153	6.1
test48	15.78	149	161	6.9
test49	17.09	145	152	6.9
test50	17.975	7	9	6.9
Avg Run-Time	16.42604			
Avg Path Length	107.34			
Avg # Nodes Expanded	121.02			
Avg Memory Usage	6.92			

wA2 - akritean

Heuristic: Akritean	Weight = 2			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	12.83	142	202	10.7
test2	13.7	142	158	10.3
test3	14.23	167	194	10.4
test4	13.75	161	168	10.4
test5	15.25	1	2	10
test6	13.85	164	176	10.4
test7	16.13	166	191	10.4
test8	14.1	89	145	10.2
test9	12.03	147	147	11.1
test10	15.6	163	173	10.4
test11	22.85	237	182	11.8
test12	13.02	16	27	10.1
test13	15.3	93	118	10.3
test14	14.15	138	165	10.3
test15	13.22	2	4	10
test16	16.13	6	10	9.9
test17	15.33	86	111	10.9
test18	16.825	85	127	9.9
test19	24.369	148	159	10
test20	15.955	156	182	10
test21	14.39	137	196	10
test22	14.125	95	123	9.9
test23	14.069	13	39	9.7
test24	15.275	108	130	9.9
test25	14.865	7	9	9.7
test26	14.255	151	175	10
test27	14.779	176	198	10.1
test28	14.74	86	101	9.9
test29	13.965	135	152	10

wA2 - akritean

test30	14.83	134	138	10
test31	15.125	157	198	10.1
test32	14.315	95	110	9.9
test33	13.39	10	14	9.7
test34	14.185	11	19	9.7
test35	14.52	151	180	10
test36	8.86	140	208	10.8
test37	14.119	98	113	9.9
test38	14.085	132	164	10
test39	15.53	148	150	10
test40	14.785	142	153	10
test41	14.69	128	134	10
test42	14.085	14	16	9.8
test43	8.7	94	124	10.7
test44	14.475	110	154	10
test45	14.465	139	158	10
test46	13.645	4	6	9.8
test47	16.265	129	147	10
test48	14.39	149	170	10.1
test49	14.225	156	166	10.1
test50	13.879	7	11	9.8
Avg Run-Time	14.6329			
Avg Path Length	107.3			
Avg # Nodes Expanded	125.94			
Avg Memory Usage	10.142			

wA2 - chebyshev

Heuristic: Chebyshev	Weight = 2			
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	19.94	143	159	6.3
test2	22.865	148	528	8.3
test3	20.07	160	336	6.1
test4	16.34	152	296	6.9
test5	15.385	1	2	6.8
test6	15.589	156	245	7
test7	22.595	158	223	8.4
test8	13.19	91	104	6.9
test9	15.585	149	258	7
test10	18.885	162	214	7
test11	18.505	171	356	6.9
test12	15.37	16	18	6.7
test13	15.255	92	139	6.8
test14	15.5	142	272	7
test15	16.505	2	4	6.8
test16	14.98	6	8	6.8
test17	15.999	87	125	6.9
test18	15.835	85	98	6.9
test19	17.33	154	226	7
test20	16.71	157	181	7
test21	15.07	139	209	7
test22	17.35	100	191	6.3
test23	15.99	13	31	6.8
test24	14.525	105	111	6.9
test25	15.82	7	9	6.8
test26	14.88	152	166	7
test27	17.53	167	297	7.1
test28	15.475	84	89	6.8
test29	16.145	139	160	7

wA2 - chebyshev

test30	16.415	137	161	7
test31	18.35	146	579	7
test32	14.95	95	117	6.9
test33	16.41	11	15	6.8
test34	15.655	12	14	6.8
test35	17.55	150	325	7.1
test36	16.145	140	165	6.8
test37	16.42	99	106	6.8
test38	16.37	133	146	6.8
test39	22.36	155	410	6.2
test40	17.599	140	159	7
test41	14.564	130	135	7
test42	18.3549	14	119	6.9
test43	21.22	95	103	6.2
test44	15.034	109	112	6.1
test45	16.88	142	151	7
test46	15.69	4	6	6.8
test47	16.265	131	144	7
test48	17.27	150	179	6.8
test49	17.82	150	294	7
test50	15.54	7	9	6.8
Avg Run-Time	16.841598			
Avg Path Length	105.76			
Avg # Nodes Expanded	170.08			
Avg Memory Usage	6.88			

wA2 - exHeuristic

Heuristic: Example Heuristic from Assignment PDF			Weight = 2	
Test Cases	Run-Time (ms)	Path Length	Nodes Expanded	Memory Usage (MB)
test1	19.925	142	166	6.1
test2	20.35	134	142	6.5
test3	18.389	149	154	6.8
test4	18.24	144	152	7
test5	15.715	1	2	6.7
test6	15.52	149	151	6.9
test7	16.405	149	156	6.9
test8	15.95	89	96	6.8
test9	15.76	137	139	6.8
test10	17.725	148	152	6.9
test11	16.71	157	161	6.9
test12	16.175	16	18	6.8
test13	14.36	90	103	6.9
test14	16.22	138	155	7
test15	14.45	2	4	6.7
test16	12.145	6	8	7
test17	17.585	86	93	6.9
test18	14.83	85	116	6.9
test19	17.72	144	161	7
test20	16.01	155	179	6.9
test21	17.589	137	161	6.9
test22	15.265	94	102	6.8
test23	14.805	13	30	6.7
test24	15.3549	104	107	6.8
test25	18.055	7	9	6.7
test26	15.65	151	161	6.9
test27	15.745	153	165	6.9
test28	16.044	84	89	6.9
test29	14.77	134	139	7

wA2 - exHeuristic

test30	16.83	134	137	7
test31	16.46	140	147	6.9
test32	15.73	95	111	6.8
test33	15.854	10	12	6.7
test34	15.255	11	15	6.7
test35	15.78	136	141	6.9
test36	17.85	139	185	6.9
test37	15.455	98	105	6.8
test38	15.15	132	141	6.8
test39	17.925	138	149	6.9
test40	16.5	141	152	7
test41	16.764	128	131	6.9
test42	15.335	15	27	6.7
test43	15.77	93	102	6.8
test44	15.425	109	121	6.8
test45	17.899	139	149	6.9
test46	15.7899	4	6	6.9
test47	14.8649	129	157	7
test48	16.54	146	153	7
test49	19.475	142	146	7.8
test50	13.52	7	9	7.8
Avg Run-Time	16.272674			
Avg Path Length	101.68			
Avg # Nodes Expanded	111.34			
Avg Memory Usage	6.88			