

ALG1

Size	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
5000	0.0408328	0.0410328	0.0413087	0.0410811	0.0404707	0.0412856
10000	0.1609632	0.1618209	0.1651084	0.1630966	0.1614137	0.1614161
15000	0.3636078	0.3669296	0.3630781	0.3633938	0.3602914	0.3639794
20000	0.6505653	0.6804193	0.6549651	0.6804911	0.6463829	0.6716036
25000	0.9997663	1.02071	1.009022	1.0123335	1.0070565	1.0063168
30000	1.4387261	1.4447718	1.4546477	1.4580082	1.4455106	1.4461007
35000	1.9661886	1.9682147	1.9718624	1.9697959	1.9677785	1.9682534
40000	2.5633098	2.5666625	2.559875	2.5711073	2.5541498	2.5665062
45000	3.2382201	3.2399935	3.2381304	3.2539863	3.2303402	3.2574847
50000	4.0068115	4.0118173	3.9927954	4.0096983	3.9919646	4.0308675
55000	4.8416205	4.8552365	4.8356512	4.8430473	4.8365475	4.8731213
60000	5.760917	5.7752976	5.7667467	5.7764524	5.7596092	5.7867161
65000	6.7656982	6.7799286	6.7832968	6.7789758	6.7655895	6.8118887
70000	7.8389644	7.8624843	7.8591207	7.8424689	7.8424281	7.8515186
75000	8.9965559	9.0247712	9.0004166	9.0001468	9.0008476	9.0185855
80000	10.2388705	10.2536482	10.2456695	10.211034	10.2481079	10.2494074
85000	11.5082086	11.5487701	11.5499733	11.5379295	11.5705208	11.6045411
90000	12.9202444	12.9511186	12.9626999	12.8782596	12.9422896	12.9598991
95000	14.3846725	14.4192372	14.3996563	14.3507729	14.405583	14.4958098
100000	15.940396	15.9756913	15.9522881	15.8863213	15.9575241	16.0275074

ALG1

Run 7	Run 8	Run 9	Run 10	Average	Theoretical RT (n^2)
0.0402554	0.040252	0.0397612	0.0402887	0.0406569	25000000
0.1613968	0.1623045	0.1608989	0.1614095	0.16198286	100000000
0.3738333	0.3662212	0.3684742	0.3877643	0.36775731	225000000
0.6672771	0.6475022	0.6523132	0.6452977	0.65968175	400000000
0.9986872	1.0011002	1.0125785	1.0025023	1.00700733	625000000
1.443894	1.4404533	1.4531085	1.4430051	1.4468226	900000000
1.9490038	1.9605536	1.9719043	1.981255	1.96748102	1225000000
2.5424273	2.5624227	2.5705755	2.5534599	2.5610496	1600000000
3.2238134	3.243876	3.2570529	3.2326285	3.2415526	2025000000
3.9869996	4.0155811	4.0243517	3.9952868	4.00661738	2500000000
4.8203444	4.8538596	4.8690566	4.8356569	4.84641418	3025000000
5.7404788	5.7839048	5.7941964	5.7578027	5.77021217	3600000000
6.7370487	6.7793472	6.7931646	6.7640269	6.7758965	4225000000
7.8104108	7.8780052	7.8761	7.8483579	7.85098589	4900000000
8.9674787	9.0063686	9.0536134	9.0189604	9.00877447	5625000000
10.182417	10.2182467	10.2518497	10.2408666	10.23401175	6400000000
11.545319	11.6006943	11.6073932	11.5583258	11.56316757	7225000000
12.903398	12.9636914	12.9618977	12.9373871	12.93808854	8100000000
14.4125157	14.4715077	14.4445034	14.4211005	14.4205359	9025000000
15.9730184	16.0041001	16.5542538	16.0020475	16.0273148	10000000000

Max:

Hidden constant

1.626276E-09
1.6198286E-09
1.634476933E-09
1.649204375E-09
1.611211728E-09
1.607580667E-09
1.606106955E-09
1.600656E-09
1.600766716E-09
1.602646952E-09
1.60212039E-09
1.602836714E-09
1.603762485E-09
1.602242018E-09
1.601559906E-09
1.599064336E-09
1.600438418E-09
1.597294881E-09
1.597843313E-09
1.60273148E-09
1.649204375E-09

ALG2

Size	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
5000	0.0024801	0.0024239	0.0024139	0.0024238	0.0024374	0.0023999
10000	0.0050625	0.0050599	0.0050785	0.005023	0.0050411	0.0050152
15000	0.0076717	0.0076076	0.0076204	0.0076594	0.007651	0.007583
20000	0.0104555	0.0104569	0.0103988	0.0103717	0.010436	0.0104043
25000	0.0132792	0.0131458	0.0131767	0.013216	0.0132595	0.0132128
30000	0.0159554	0.01574	0.0158305	0.0159016	0.0157688	0.0158963
35000	0.018707	0.0187357	0.0185539	0.0185683	0.018665	0.0188371
40000	0.0217463	0.0216183	0.0217295	0.021602	0.0217491	0.0216113
45000	0.0245879	0.0243563	0.0244873	0.0244113	0.0244796	0.0244474
50000	0.0274527	0.0273577	0.0273191	0.0273771	0.0273187	0.0272658
55000	0.0301501	0.0301478	0.0302238	0.030123	0.0302027	0.0301756
60000	0.0327475	0.0328332	0.0326918	0.0327535	0.0327139	0.0327777
65000	0.0348865	0.0350053	0.034772	0.034627	0.0346911	0.0351725
70000	0.0386565	0.0384534	0.0384151	0.0386058	0.0385971	0.0383946
75000	0.0416037	0.0415507	0.0416731	0.0416124	0.0417169	0.0415654
80000	0.0447295	0.0446338	0.0446165	0.044641	0.0447027	0.0446861
85000	0.0475666	0.0477245	0.0476247	0.0476269	0.0476357	0.047628
90000	0.0505259	0.0505357	0.0504295	0.0504379	0.0503938	0.0504644
95000	0.0536366	0.0537546	0.0537554	0.0536578	0.0537183	0.0536687
100000	0.0567101	0.0564328	0.0566323	0.0567055	0.05658	0.0566838

ALG2

Run 7	Run 8	Run 9	Run 10	Average	Theoretical RT (n*log(n))
0.0024185	0.0023977	0.002409	0.0024236	0.00242278	61438.5618977473
0.0050469	0.0050126	0.0050132	0.0050231	0.0050376	132877.123795495
0.0075901	0.0076136	0.0076205	0.007581	0.00761983	208090.123204059
0.0103805	0.0103856	0.0104172	0.0104035	0.010411	285754.247590989
0.0131942	0.0131958	0.0131914	0.0131655	0.01320369	365241.01186092
0.0158602	0.0158081	0.0158561	0.0159081	0.01585251	446180.246408118
0.0186243	0.01865	0.0186179	0.018657	0.01866162	528327.355556247
0.0216445	0.0217462	0.021572	0.0217338	0.0216753	611508.495181978
0.0245222	0.0245133	0.024491	0.0244609	0.02447572	695593.682144629
0.0273019	0.0274048	0.0272641	0.0273806	0.02734425	780482.023721841
0.0300634	0.0301318	0.0301476	0.0301058	0.03014716	866092.919900271
0.0328059	0.0326709	0.0327269	0.0326828	0.03274041	952360.492816237
0.0346731	0.0348271	0.0345706	0.034879	0.03481042	1039229.88634989
0.0385474	0.0384314	0.0384506	0.0383259	0.03848778	1126654.71111249
0.0416467	0.0416342	0.0415622	0.0417034	0.04162687	1214595.22313685
0.0446408	0.0446691	0.044654	0.0446682	0.04466417	1303016.99036396
0.0476752	0.0476971	0.0476422	0.0477003	0.04765212	1391889.89376798
0.0505779	0.0503912	0.0503847	0.0504539	0.05045949	1481187.36428926
0.0537915	0.0536641	0.0536671	0.0537441	0.05370582	1570885.78983434
0.056581	0.0565922	0.0565414	0.0565429	0.0566002	1660964.04744368

Max:

Hidden constant

3.943419125E-08
3.791171765E-08
3.661793209E-08
3.643340418E-08
3.615062266E-08
3.552938555E-08
3.532207788E-08
3.544562368E-08
3.518680607E-08
0.000000035
3.48082282E-08
3.437816903E-08
3.349636154E-08
3.416111398E-08
3.427221613E-08
3.427750392E-08
3.423555284E-08
3.406691902E-08
3.418823975E-08
3.407671592E-08
3.943419125E-08

ALG3

Size	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
5000	0.0010577	0.0010359	0.0011107	0.0011159	0.0010672	0.0010699
10000	0.0022897	0.0022964	0.0024237	0.0024339	0.0022723	0.0023902
15000	0.0036214	0.0037318	0.0036081	0.0037147	0.003597	0.0035511
20000	0.0051037	0.0047951	0.0051989	0.0048103	0.0049341	0.0051821
25000	0.0061598	0.0062586	0.0067819	0.0063943	0.0065734	0.0062895
30000	0.0082927	0.007479	0.0076489	0.0076687	0.0077803	0.0078069
35000	0.0092898	0.009507	0.0092171	0.009347	0.0089912	0.0090929
40000	0.0108065	0.0104929	0.0113225	0.0104383	0.010754	0.010918
45000	0.0120578	0.0121102	0.0120811	0.01237	0.0119282	0.0120278
50000	0.0136332	0.0134373	0.0139422	0.013504	0.0138846	0.0142441
55000	0.015009	0.0153168	0.0157122	0.0151751	0.0154306	0.0150823
60000	0.0167974	0.0166288	0.016337	0.0162833	0.0171727	0.0162874
65000	0.01797	0.0180085	0.0179126	0.0186072	0.0179328	0.0182843
70000	0.0196838	0.0203623	0.019279	0.0197206	0.0196451	0.0196361
75000	0.0217066	0.0216563	0.0214977	0.0210028	0.0215529	0.0214577
80000	0.0227193	0.0220752	0.023654	0.0228792	0.0227665	0.0225354
85000	0.0258232	0.0237741	0.0238841	0.0246343	0.0241017	0.024408
90000	0.0264037	0.0251341	0.0249733	0.0271979	0.025522	0.0263871
95000	0.026647	0.0290051	0.0277259	0.0272281	0.0275963	0.0277546
100000	0.0289151	0.0296284	0.0299449	0.0287046	0.0301707	0.0285022

ALG3

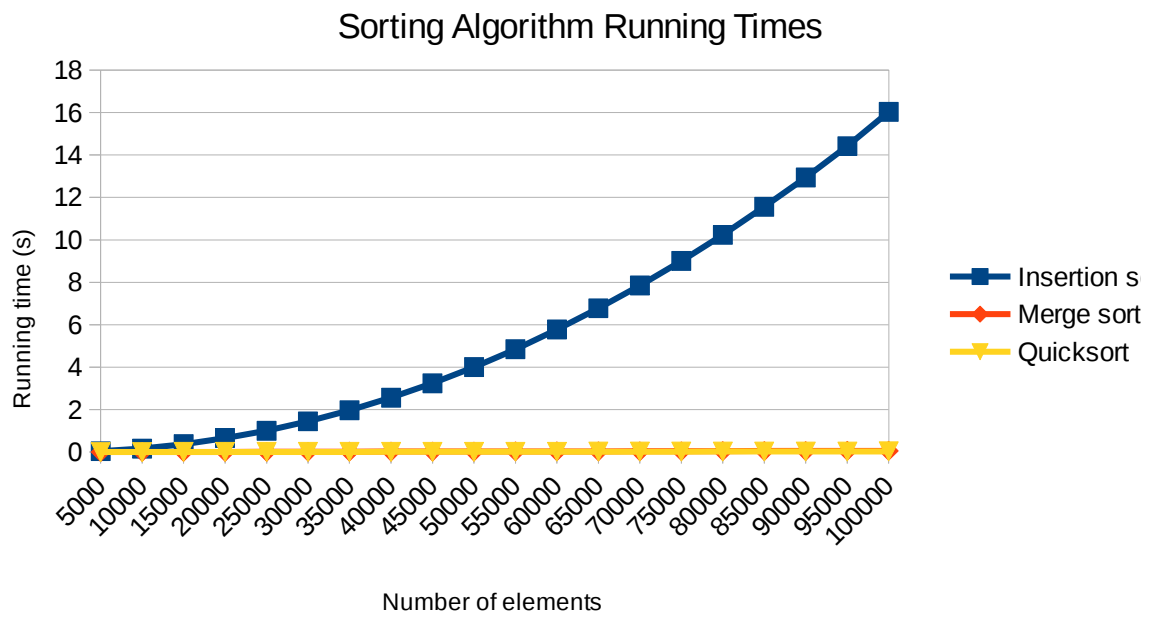
Run 7	Run 8	Run 9	Run 10	Average	Theoretical RT (n*log(n))
0.0010109	0.0010997	0.0010693	0.0010907	0.00107279	61438.5618977473
0.0023199	0.0022611	0.0023094	0.0023135	0.00233101	132877.123795495
0.0037668	0.0036996	0.003693	0.003556	0.00365395	208090.123204059
0.0050649	0.0051027	0.0050057	0.0050413	0.00502388	285754.247590989
0.0063965	0.0065606	0.0064699	0.0064084	0.00642929	365241.01186092
0.0080966	0.0079517	0.0081846	0.0078479	0.00787573	446180.246408118
0.0093609	0.0092019	0.0091651	0.008789	0.00919619	528327.355556247
0.010647	0.0108508	0.0105342	0.0106281	0.01073923	611508.495181978
0.0118629	0.0119476	0.0122129	0.0122667	0.01208652	695593.682144629
0.0136277	0.0138614	0.0140242	0.013465	0.01376237	780482.023721841
0.0150315	0.0152077	0.0158648	0.0155649	0.01533949	866092.919900271
0.0169711	0.015953	0.0161532	0.0164914	0.01650753	952360.492816237
0.0181331	0.0177888	0.0188497	0.0177252	0.01812122	1039229.88634989
0.0200545	0.019779	0.0200499	0.0193245	0.01975348	1126654.71111249
0.021874	0.0203987	0.020751	0.0208257	0.02127234	1214595.22313685
0.0227265	0.0230559	0.0225336	0.0225116	0.02274572	1303016.99036396
0.0255053	0.0239257	0.0241022	0.0237999	0.02439585	1391889.89376798
0.0271953	0.0255715	0.0255869	0.0259868	0.02599586	1481187.36428926
0.027907	0.0270997	0.0276965	0.0279438	0.0276604	1570885.78983434
0.0291199	0.028624	0.0293129	0.0298143	0.0292737	1660964.04744368

Max:

Hidden constant

1.7752694176E-08
1.7410822374E-08
1.7088749554E-08
1.7642082462E-08
1.7545674751E-08
1.7589079891E-08
1.6635519451E-08
1.7380134673E-08
1.7634864023E-08
1.7252159039E-08
0.000000018
1.7316341999E-08
1.705609147E-08
1.7152105085E-08
1.714620608E-08
1.7276520695E-08
1.7098981828E-08
1.7544573108E-08
1.7788562466E-08
1.7949997199E-08
0.000000018

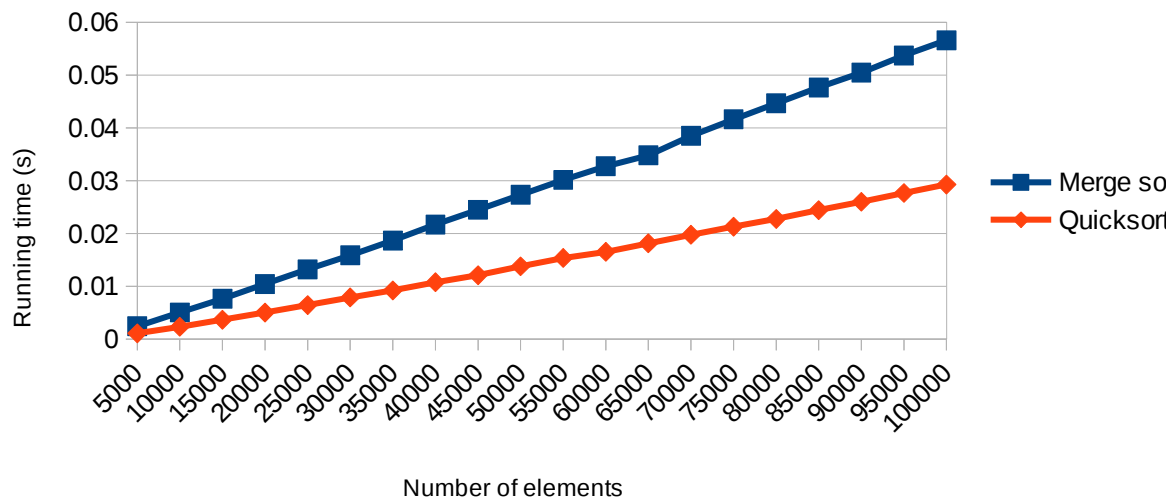
Graphs



Graphs

Sorting Algorithm Running Times

Comparing only merge sort and quick sort



Graphs

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