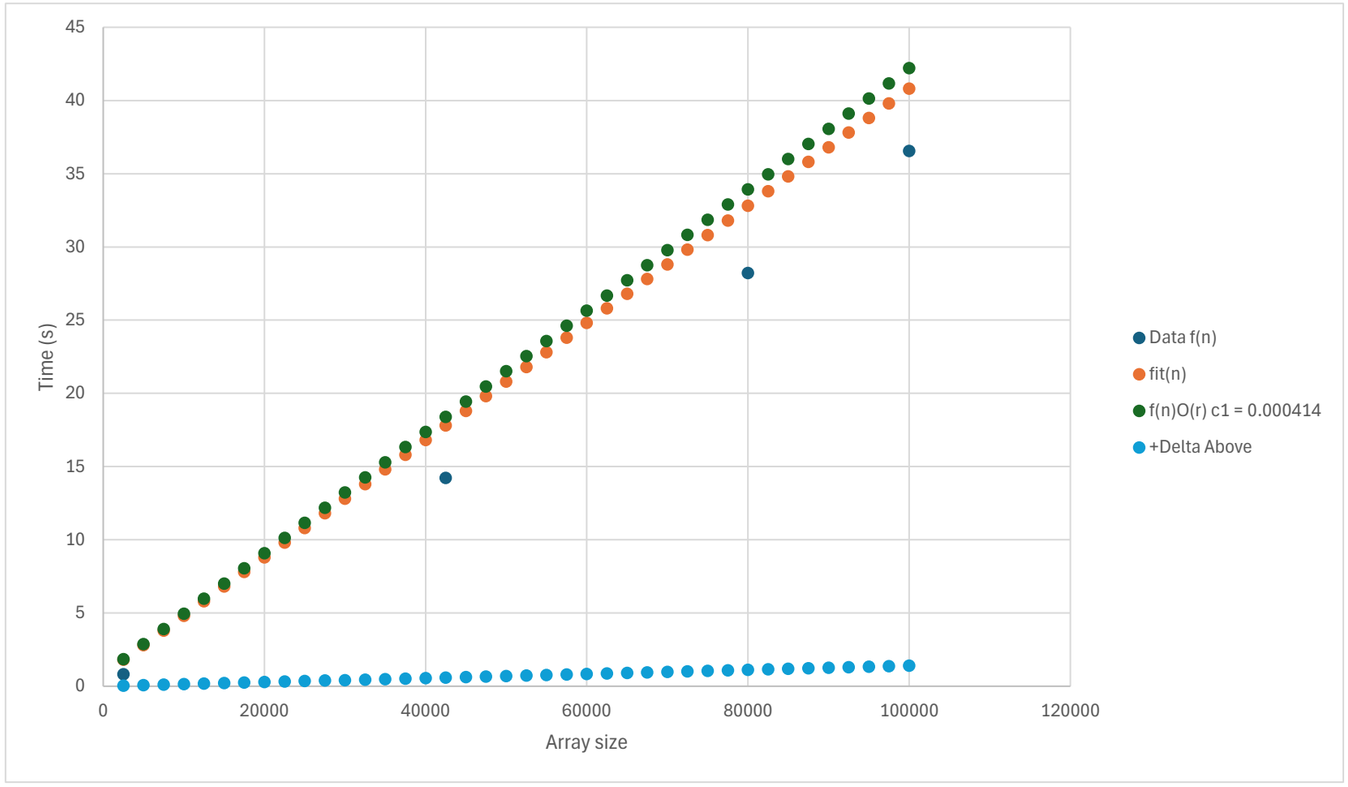
Heap sort Timing analysis

r^0	Array Size	Data f(n)	fitf(n)
1	2500	0.82676	1.80640
1	42500	14.2289	17.80640
1	80000	28.2259	32.80640
1	100000	36.5469	40.80640

r^0	Array Size	Time(s)	f(n)O(r) c1 = 0.000414	fit(n)	+Delta Above
1	2500	0.82676	1.84140	1.80640	0.03500
1	5000	1.50436	2.87640	2.80640	0.07000
1	7500	2.17986	3.91140	3.80640	0.10500
1	10000	2.8948	4.94640	4.80640	0.14000
1	12500	4.0061	5.98140	5.80640	0.17500
1	15000	4.66568	7.01640	6.80640	0.21000
1	17500	6.07978	8.05140	7.80640	0.24500
1	20000	6.31152	9.08640	8.80640	0.28000
1	22500	7.8962	10.12140	9.80640	0.31500
1	25000	8.55102	11.15640	10.80640	0.35000
1	27500	9.60378	12.19140	11.80640	0.38500
1	30000	10.3433	13.22640	12.80640	0.42000
1	32500	10.7493	14.26140	13.80640	0.45500
1	35000	11.8592	15.29640	14.80640	0.49000
1	37500	12.7251	16.33140	15.80640	0.52500
1	40000	14.1757	17.36640	16.80640	0.56000
1	42500	14.2289	18.40140	17.80640	0.59500
1	45000	15.2592	19.43640	18.80640	0.63000
1	47500	16.6465	20.47140	19.80640	0.66500
1	50000	17.846	21.50640	20.80640	0.70000
1	52500	18.5685	22.54140	21.80640	0.73500
1	55000	19.5253	23.57640	22.80640	0.77000
1	57500	19.9721	24.61140	23.80640	0.80500
1	60000	20.6077	25.64640	24.80640	0.84000
1	62500	21.5665	26.68140	25.80640	0.87500
1	65000	22.8628	27.71640	26.80640	0.91000
1	67500	24.8122	28.75140	27.80640	0.94500
1	70000	24.7718	29.78640	28.80640	0.98000
1	72500	25.3446	30.82140	29.80640	1.01500
1	75000	26.7776	31.85640	30.80640	1.05000
1	77500	27.6775	32.89140	31.80640	1.08500
1	80000	28.2259	33.92640	32.80640	1.12000
1	82500	28.6355	34.96140	33.80640	1.15500
1	85000	29.4006	35.99640	34.80640	1.19000
1	87500	31.2556	37.03140	35.80640	1.22500
1	90000	32.0948	38.06640	36.80640	1.26000
1	92500	32.984	39.10140	37.80640	1.29500
1	95000	33.8605	40.13640	38.80640	1.33000
1	97500	39.8167	41.17140	39.80640	1.36500
1	100000	36.5469	42.20640	40.80640	1.40000



f(n) =c0*x^0 + c1*x^1

f(n) =c0*r^0 + c1*r^1

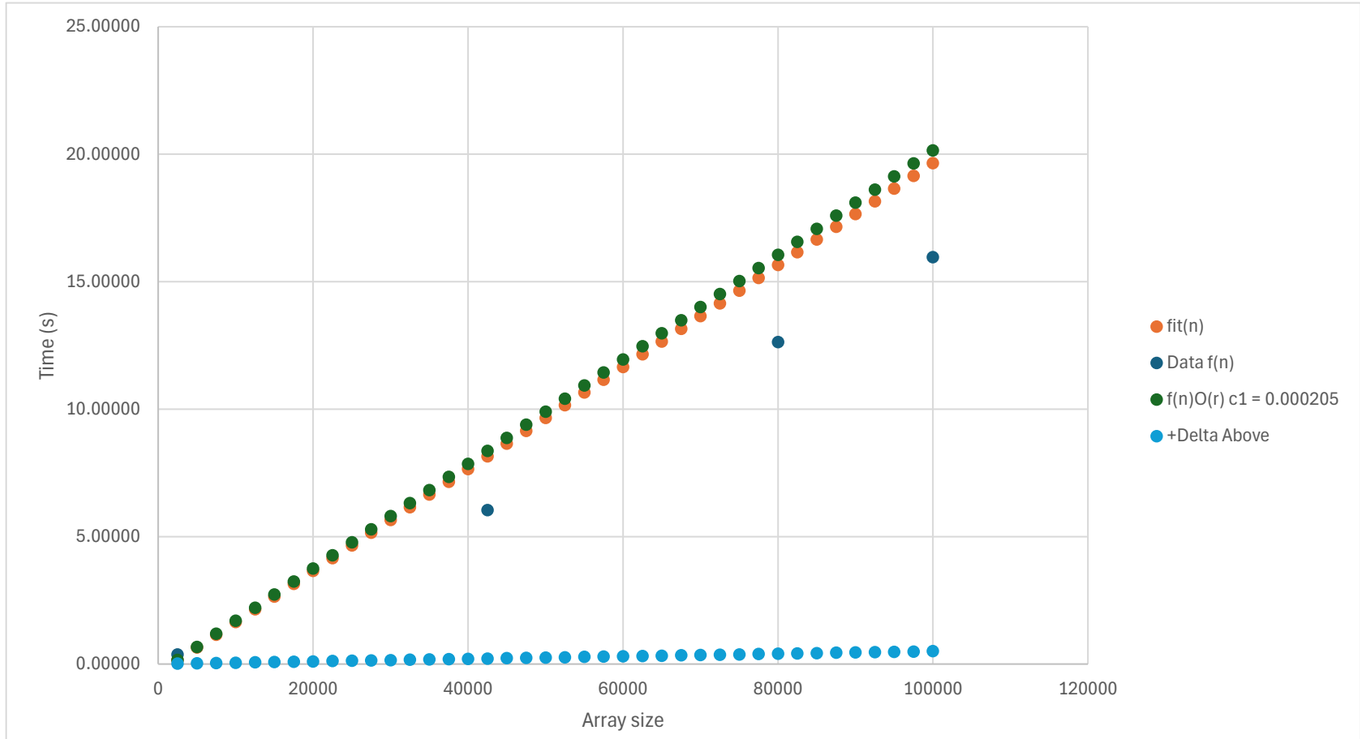
c0 = 0.8064

c1 = 0.0004

quick sort Timing analysis

r^0	Array Size	Data f(n)	fitf(n)
1	2500	0.36934	0.14630
1	42500	6.03562	8.14630
1	80000	12.6289	15.64630
1	100000	15.952	19.64630

r^0	Array Size	Time (s)	f(n)O(r) c1 = 0.000205	fit(n)	+Delta Above
1	2500	0.36934	0.15880	0.14630	0.01250
1	5000	0.62912	0.67130	0.64630	0.02500
1	7500	0.86974	1.18380	1.14630	0.03750
1	10000	1.2499	1.69630	1.64630	0.05000
1	12500	1.7095	2.20880	2.14630	0.06250
1	15000	1.93212	2.72130	2.64630	0.07500
1	17500	2.612	3.23380	3.14630	0.08750
1	20000	2.80022	3.74630	3.64630	0.10000
1	22500	3.80878	4.25880	4.14630	0.11250
1	25000	3.75224	4.77130	4.64630	0.12500
1	27500	4.0253	5.28380	5.14630	0.13750
1	30000	4.19516	5.79630	5.64630	0.15000
1	32500	4.68614	6.30880	6.14630	0.16250
1	35000	4.9677	6.82130	6.64630	0.17500
1	37500	5.5918	7.33380	7.14630	0.18750
1	40000	5.97982	7.84630	7.64630	0.20000
1	42500	6.03562	8.35880	8.14630	0.21250
1	45000	6.50756	8.87130	8.64630	0.22500
1	47500	7.0292	9.38380	9.14630	0.23750
1	50000	7.72128	9.89630	9.64630	0.25000
1	52500	7.85002	10.40880	10.14630	0.26250
1	55000	8.3102	10.92130	10.64630	0.27500
1	57500	8.9134	11.43380	11.14630	0.28750
1	60000	8.89028	11.94630	11.64630	0.30000
1	62500	9.3656	12.45880	12.14630	0.31250
1	65000	9.71172	12.97130	12.64630	0.32500
1	67500	10.2744	13.48380	13.14630	0.33750
1	70000	10.6094	13.99630	13.64630	0.35000
1	72500	10.9828	14.50880	14.14630	0.36250
1	75000	11.8325	15.02130	14.64630	0.37500
1	77500	11.5932	15.53380	15.14630	0.38750
1	80000	12.6289	16.04630	15.64630	0.40000
1	82500	12.5635	16.55880	16.14630	0.41250
1	85000	13.0714	17.07130	16.64630	0.42500
1	87500	13.373	17.58380	17.14630	0.43750
1	90000	14.1582	18.09630	17.64630	0.45000
1	92500	14.3393	18.60880	18.14630	0.46250
1	95000	14.8696	19.12130	18.64630	0.47500
1	97500	15.7241	19.63380	19.14630	0.48750
1	100000	15.952	20.14630	19.64630	0.50000



f(n) =c0*x^0 + c1*x^1

f(n) =c0*r^0 + c1*r^1

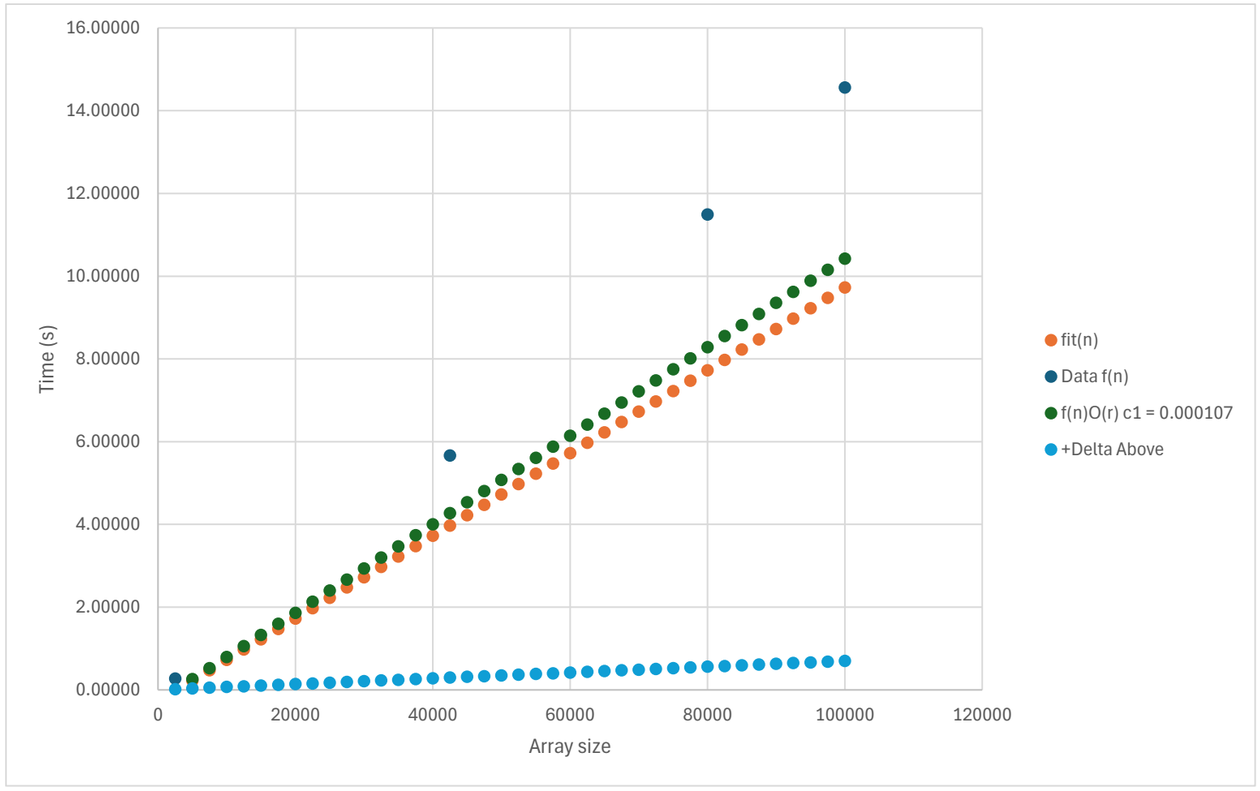
c0 = -0.3537

c1 = 0.0002

Shell sort Timing analysis

r^0	Array Size	Data f(n)	fitf(n)
1	2500	0.27344	-0.02590
1	42500	5.66862	3.97410
1	80000	11.4893	7.72410
1	100000	14.5615	9.72410

r^0	Array Size	Time (s)	f(n)O(r) c1 = 0.000107	fit(n)	+Delta Above
1	2500	0.27344	-0.00840	-0.02590	0.01750
1	5000	0.4934	0.25910	0.22410	0.03500
1	7500	0.73156	0.52660	0.47410	0.05250
1	10000	0.99854	0.79410	0.72410	0.07000
1	12500	1.34026	1.06160	0.97410	0.08750
1	15000	1.56248	1.32910	1.22410	0.10500
1	17500	2.02786	1.59660	1.47410	0.12250
1	20000	2.51556	1.86410	1.72410	0.14000
1	22500	3.12534	2.13160	1.97410	0.15750
1	25000	2.96022	2.39910	2.22410	0.17500
1	27500	3.2155	2.66660	2.47410	0.19250
1	30000	3.5322	2.93410	2.72410	0.21000
1	32500	3.91238	3.20160	2.97410	0.22750
1	35000	4.40504	3.46910	3.22410	0.24500
1	37500	4.71676	3.73660	3.47410	0.26250
1	40000	5.1759	4.00410	3.72410	0.28000
1	42500	5.66862	4.27160	3.97410	0.29750
1	45000	5.66206	4.53910	4.22410	0.31500
1	47500	6.11702	4.80660	4.47410	0.33250
1	50000	6.70814	5.07410	4.72410	0.35000
1	52500	6.56212	5.34160	4.97410	0.36750
1	55000	7.26002	5.60910	5.22410	0.38500
1	57500	7.90416	5.87660	5.47410	0.40250
1	60000	7.88838	6.14410	5.72410	0.42000
1	62500	8.35612	6.41160	5.97410	0.43750
1	65000	8.8764	6.67910	6.22410	0.45500
1	67500	9.05164	6.94660	6.47410	0.47250
1	70000	9.25194	7.21410	6.72410	0.49000
1	72500	9.52196	7.48160	6.97410	0.50750
1	75000	10.0095	7.74910	7.22410	0.52500
1	77500	10.4334	8.01660	7.47410	0.54250
1	80000	11.4893	8.28410	7.72410	0.56000
1	82500	11.6898	8.55160	7.97410	0.57750
1	85000	12.5771	8.81910	8.22410	0.59500
1	87500	11.7978	9.08660	8.47410	0.61250
1	90000	12.5278	9.35410	8.72410	0.63000
1	92500	12.6608	9.62160	8.97410	0.64750
1	95000	13.7492	9.88910	9.22410	0.66500
1	97500	13.9102	10.15660	9.47410	0.68250
1	100000	14.5615	10.42410	9.72410	0.70000



f(n) =c0*x^0 + c1*x^1

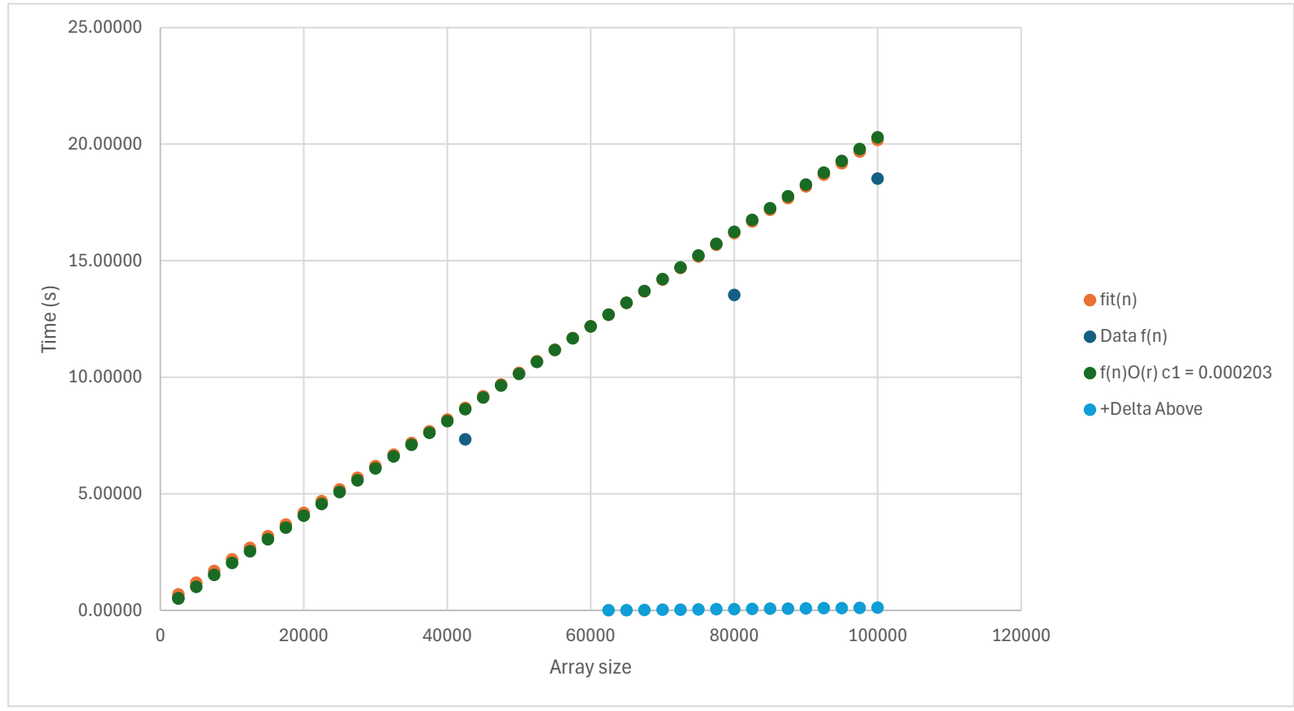
f(n) =c0*r^0 + c1*r^1

c0 =	-0.2759
c1 =	0.0001

Merge sort Timing analysis

r^0	Array Size	Data f(n)	fitf(n)
1	2500	0.52364	0.68590
1	42500	7.34286	8.68590
1	80000	13.5318	16.18590
1	100000	18.5286	20.18590

r^0	Array Size	Time(s)	f(n)O(r) c1 = 0.000203	fit(n)	+Delta Above
1	2500	0.52364	0.50750	0.68590	-0.17840
1	5000	0.83122	1.01500	1.18590	-0.17090
1	7500	1.12750	1.52250	1.68590	-0.16340
1	10000	1.54116	2.03000	2.18590	-0.15590
1	12500	2.04236	2.53750	2.68590	-0.14840
1	15000	2.44338	3.04500	3.18590	-0.14090
1	17500	2.99046	3.55250	3.68590	-0.13340
1	20000	3.75472	4.06000	4.18590	-0.12590
1	22500	4.41028	4.56750	4.68590	-0.11840
1	25000	4.21694	5.07500	5.18590	-0.11090
1	27500	5.08744	5.58250	5.68590	-0.10340
1	30000	5.10000	6.09000	6.18590	-0.09590
1	32500	5.43350	6.59750	6.68590	-0.08840
1	35000	5.89136	7.10500	7.18590	-0.08090
1	37500	6.43230	7.61250	7.68590	-0.07340
1	40000	6.58486	8.12000	8.18590	-0.06590
1	42500	7.34286	8.62750	8.68590	-0.05840
1	45000	7.36816	9.13500	9.18590	-0.05090
1	47500	8.11074	9.64250	9.68590	-0.04340
1	50000	9.07810	10.15000	10.18590	-0.03590
1	52500	9.27926	10.65750	10.68590	-0.02840
1	55000	9.61000	11.16500	11.18590	-0.02090
1	57500	9.61794	11.67250	11.68590	-0.01340
1	60000	9.84084	12.18000	12.18590	-0.00590
1	62500	10.68760	12.68750	12.68590	0.00160
1	65000	11.32680	13.19500	13.18590	0.00910
1	67500	11.48720	13.70250	13.68590	0.01660
1	70000	11.82480	14.21000	14.18590	0.02410
1	72500	12.33690	14.71750	14.68590	0.03160
1	75000	12.57940	15.22500	15.18590	0.03910
1	77500	13.26270	15.73250	15.68590	0.04660
1	80000	13.53180	16.24000	16.18590	0.05410
1	82500	13.74650	16.74750	16.68590	0.06160
1	85000	14.31300	17.25500	17.18590	0.06910
1	87500	14.94000	17.76250	17.68590	0.07660
1	90000	15.36600	18.27000	18.18590	0.08410
1	92500	16.10070	18.77750	18.68590	0.09160
1	95000	16.92110	19.28500	19.18590	0.09910
1	97500	16.90800	19.79250	19.68590	0.10660
1	100000	18.52860	20.30000	20.18590	0.11410



f(n) =c0*x^0 + c1*x^1

f(n) =c0*r^0 + c1*r^1

c0 = 0.1859

c1 = 0.0002