

Key					
Small: 10,000					
Medium: 100,000	● Fastest				
Large: 1,000,000	● Slowest				
Unsorted: Runtime Summary					
Unsorted	Mergesort	Quicksort	Heapsort	Overall Avg.	Overall St. Dev.
Small	49.31169351	24.38139915	64.7876819	46.16025819	20.386652
Medium	580.4796537	313.8713678	820.7049529	571.6853248	253.5312129
Large	7296.410306	5996.961363	11343.45207	8212.274581	2788.430787
Overall Avg.	2642.067218	2111.738043	4076.314902		
Overall St. Dev.	4039.519407	3367.814023	6304.864369		
Sorted: Runtime Summary					
Unsorted	Mergesort	Quicksort	Heapsort	Overall Avg.	Overall St. Dev.
Small	48.858881	27.28293737	78.20568085	51.4491664	25.56000068
Medium	478.7210385	276.3173421	833.1008434	529.3797414	281.8274205
Large	5720.05167	5204.430715	9215.810235	6713.430874	2182.405346
Overall Avg.	2082.543863	1836.010332	3375.705587		
Overall St. Dev.	3157.497847	2919.793904	5071.743626		
Reverse Sorted: Runtime Summary					
Unsorted	Mergesort	Quicksort	Heapsort	Overall Avg.	Overall St. Dev.
Small	40.97599188	99.95833238	63.19564184	68.04332203	29.78848981
Medium	470.1456149	382.9897881	787.356178	546.830527	212.8108929
Large	5548.029923	13892.99048	9691.507538	9710.842646	4172.513876
Overall Avg.	2019.717177	4791.979533	3514.019786		
Overall St. Dev.	3063.133978	7882.977031	5362.100178		

	Unsorted				Sorted				Reverse		
	Small	Medium	Large		Small	Medium	Large		Small	Medium	Large
	52.62422562	576.3888359	7319.066048		50.26197433	475.356102	5723.402023		40.80295563	467.8399563	5554.421902
	50.80914497	583.4069252	7355.995178		48.31290245	509.5131397	5750.860691		40.53902626	468.7402248	5526.409864
	48.20609093	570.6617832	7214.269876		49.0860939	488.1579876	5781.173944		44.81315613	476.2730598	5609.059095
	50.49014091	577.4409771	7459.642887		48.61998558	472.55826	5856.577158		41.06998444	485.669136	5677.197218
	49.04317856	579.4789791	7243.174076		48.59495163	480.7040691	5701.602936		39.89481926	473.6959934	5689.889908
	50.03595352	606.3017845	7783.489943		48.66719246	477.4880409	5734.916925		39.81161118	465.0731087	5543.869972
	47.84369469	577.0800114	7488.695621		51.04422569	505.0079823	5807.329178		42.76585579	465.8420086	5603.834867
	48.68721962	597.2218513	7278.980017		50.60791969	481.8849564	5887.004852		39.84808922	489.1219139	5660.379171
	52.47306824	623.9449978	7839.489222		50.30107498	493.1278229	5808.598042		41.56589508	465.9731388	5488.723993
	47.85108566	574.4802952	7539.428234		49.60489273	474.4989872	5933.909893		50.48513412	509.9971294	5644.441128
	48.80309105	573.8620758	7401.483059		50.01997948	477.1721363	5796.714783		40.59290886	464.4412994	5501.389742
	50.1909256	569.589138	7170.782804		48.52199554	478.1401157	5634.558201		39.49117661	464.1799927	5496.085882
	50.14300346	573.2958317	7174.865723		48.53200912	472.9959965	5650.00391		39.75915909	464.0181065	5482.922792
	48.93112183	570.3420639	7190.17005		48.46310616	473.0682373	5655.790091		40.03667831	465.3937817	5439.94379
	48.53701591	574.7208595	7170.315027		48.60115051	472.3701477	5622.409105		39.73698616	460.0338936	5487.764835
	48.89798164	571.5179443	7144.726038		48.49410057	473.954916	5630.109072		39.80064392	456.6500187	5502.346277
	48.75898361	571.9423294	7249.307156		48.56872559	476.7012596	5676.23806		39.96372223	466.2117958	5477.490902
	48.33483696	570.6291199	7157.025099		47.23000526	476.1939049	5664.712191		40.20118713	463.5310173	5485.173941
	47.68490791	572.4089146	7138.995886		48.23303223	473.1719494	5628.293753		40.54784775	461.163044	5460.239887
	48.45094681	577.6548386	7490.241051		48.57587814	475.1019478	5654.059887		39.91913795	469.1357613	5452.339172
	48.79784584	566.808939	7142.205		48.49505424	473.5620022	5659.657001		40.06910324	465.9800529	5497.252703
	48.21300507	570.5049038	7152.680159		48.48003387	476.9229889	5648.882866		39.6490097	464.4060135	5479.647875
	48.817873	569.6599483	7167.24205		48.53606224	476.8638611	5650.16818		40.30489922	464.4122124	5455.152035
	48.66194725	570.2416897	7183.864832		48.38109016	475.1701355	5632.811069		38.9623642	460.5817795	5475.347996
	48.56133461	578.0968666	7171.910048		48.92516136	473.0730057	5878.747225		42.07587242	480.9160233	5764.225006
	52.33120918	645.4808712	7409.821749		49.25107956	476.6457081	5682.038069		39.96491432	474.894762	5561.955214
	48.52604866	570.5821514	7214.286089		48.56777191	479.2289734	5649.82605		39.09683228	468.2700634	5504.533052
	53.14683914	586.9441032	7180.217266		48.54393005	471.6176987	5667.425871		41.65911674	471.1101055	5521.726847
	47.06215858	575.6013393	7244.642973		48.44903946	482.2127819	5680.87101		40.58694839	458.8899612	5620.234966
	48.43592644	588.0992413	7215.29603		47.79601097	469.1660404	5852.858067		45.26472092	491.9230938	5776.897669
Average	49.31169351	580.4796537	7296.410306		48.858881	478.7210385	5720.05167		40.97599188	470.1456149	5548.029923
Standard Dev.	1.568573452	17.27045662	183.4768703		0.8373853246	9.171831117	91.96635765		2.312968885	11.4175881	92.8824386

	Unsorted				Sorted				Reverse		
	Small	Medium	Large		Small	Medium	Large		Small	Medium	Large
	25.51817894	302.3760319	6131.863832		27.23097801	271.6698647	5305.665016		98.36602211	378.7510395	14633.47578
	26.06296539	332.7889442	6329.541922		27.19378471	275.8290768	5352.972031		84.26189423	405.2507877	15127.27714
	26.48591995	374.5307922	6450.016022		29.05774117	284.0740681	5407.048941		103.4002304	383.0747604	13688.761
	23.63324165	298.4170914	5739.60495		26.99804306	276.8988609	5139.494896		88.95611763	374.0849495	13269.63091
	21.97504044	301.9440174	5744.902134		27.10413933	283.5409641	5377.946854		80.63697815	387.4950409	13337.71586
	23.32496643	300.0979424	5743.376732		26.88479424	274.3589878	5153.217077		95.96395493	377.0208359	13914.76917
	26.46303177	307.6679707	6222.296		27.30584145	282.487154	5278.512955		87.67199516	391.6721344	13914.69502
	24.40094948	325.3428936	6235.473156		26.95298195	282.9077244	5198.619127		82.39793777	376.6710758	14093.92309
	23.69689941	305.8691025	5898.826838		27.56714821	280.1032066	5196.741104		103.3110619	376.2712479	14051.96214
	23.02122116	313.4288788	6244.143009		26.95584297	270.5309391	5133.7111		74.23996925	378.3881664	13909.84893
	23.15211296	299.4742393	5813.401222		26.93104744	269.6940899	5137.552977		99.1332531	364.7520542	13340.36922
	25.69794655	306.7038059	6101.680994		27.62794495	287.9800797	5241.261959		142.9171562	383.728981	14799.34072
	23.01001549	300.8031845	5744.74597		26.72290802	272.7706432	5201.216936		115.7209873	371.5391159	15106.10199
	27.03094482	331.0582638	6830.910921		28.20801735	287.4450684	5415.061951		126.0781288	396.463871	13213.40179
	22.2299099	306.702137	5664.388895		27.54306793	267.3752308	5089.266062		105.3261757	378.827095	13538.37204
	22.27306366	304.6579361	5763.67116		27.22787857	271.5637684	5115.450859		81.63905144	377.8898716	13022.07088
	24.11603928	305.2258492	5738.282919		27.12702751	268.2871819	5122.781038		93.48368645	382.3010921	14345.45517
	25.51317215	306.8401814	5805.389166		26.95298195	266.502142	5124.653101		121.1228371	373.7370968	13556.50997
	23.89788628	307.5683117	5872.665882		27.08506584	276.4310837	5122.6511		99.09200668	388.1819248	13098.42205
	25.97570419	325.9649277	5861.176014		26.97491646	269.6740627	5134.770155		88.81211281	381.0710907	12384.07183
	22.33695984	307.5151443	5793.686867		26.96275711	272.4449635	5117.463112		95.29280663	384.8638535	15532.50504
	26.10301971	300.8520603	5729.5959		26.98874474	271.6181278	5110.70013		98.74463081	377.7399063	13682.66177
	24.52993393	305.1459789	5800.915003		27.41384506	275.3169537	5178.960085		137.1641159	371.1590767	12551.78428
	26.31926537	301.7373085	5918.169022		27.78697014	290.8399105	5383.623838		103.5318375	404.3309689	13610.51726
	23.71406555	310.8000755	6338.053226		27.04620361	268.6212063	5194.510937		109.4379425	394.6568966	13933.11691
	23.27179909	326.3528347	5756.356001		27.11224556	269.2558765	5070.966959		82.39102364	380.0799847	13411.50999
	27.81009674	383.3551407	6921.959877		27.99701691	294.0061092	5344.642162		113.1420135	399.6469975	14372.45727
	22.90725708	313.1790161	5948.622942		27.35614777	272.7150917	5148.053169		95.45230865	371.8729019	14842.63706
	23.32615852	299.4229794	5980.013132		27.03714371	282.7489376	5228.811741		79.70786095	387.4189854	14953.66502
	23.64420891	310.3179932	5785.111189		27.13489532	271.8288898	5106.594086		111.3538742	390.7518387	13552.68502
Average	24.38139915	313.8713678	5996.961363		27.28293737	276.3173421	5204.430715		99.95833238	382.9897881	13892.99048
Standard Dev.	1.620954516	20.16681594	324.1761304		0.4778756718	7.513091722	104.5312232		16.82771216	9.979726348	771.5825419

	Unsorted				Sorted				Reverse		
	Small	Medium	Large		Small	Medium	Large		Small	Medium	Large
	75.24299622	833.0528736	12677.39892		84.18107033	887.8791332	9383.899212		66.37215614	813.8666153	9916.378975
	69.49400902	847.110033	12225.05498		78.13692093	849.1299152	9419.630051		63.96508217	803.1101227	9875.68593
	65.12117386	838.321209	12364.00485		80.72280884	850.632906	9511.380911		61.77282333	809.9551201	10056.78105
	63.7140274	809.7269535	11789.62708		77.64291763	823.8637447	9324.551105		61.0871315	789.7441387	9640.213966
	62.87884712	801.5170097	11645.12777		80.26170731	847.2807407	9413.403988		64.73112106	810.5909824	9753.427029
	62.84499168	816.4496422	11118.29877		77.50606537	828.2499313	9232.604027		63.51280212	776.0560513	9729.649067
	65.5040741	803.6270142	10886.81579		77.55303383	821.3500977	9094.347954		63.38310242	775.5427361	9653.692722
	63.39883804	823.2929707	11425.24028		79.23603058	871.1416721	9128.671885		62.43896484	781.7289829	9649.45507
	63.05789948	808.4058762	11488.04712		79.22887802	847.4538326	9392.152071		63.57192993	771.024704	9746.589184
	66.61510468	801.3079166	11067.67893		78.06396484	830.2378654	9150.902987		64.027071	781.1889648	9584.390163
	64.89706039	808.4640503	11040.07602		77.3832798	850.5439758	9273.282051		65.26017189	801.7148972	9738.49082
	63.29607964	839.9050236	11110.40306		78.97782326	830.4860592	9192.728996		62.08610535	777.4968147	9615.941763
	63.0300045	810.1959229	11109.17878		77.1791935	832.7260017	9141.870975		64.81099129	774.3701935	9643.956184
	62.9067421	822.0090866	11111.89985		79.06603813	824.4740963	9242.486		63.51900101	815.5050278	9583.817959
	62.10684776	800.1980782	10933.79092		77.93784142	814.5399094	9035.659075		61.42997742	770.8659172	9525.786161
	61.50484085	799.4430065	10926.13506		78.24420929	815.1462078	9122.550011		58.76302719	774.0299702	9648.391962
	64.25595284	803.4951687	11263.26394		79.04696465	824.3811131	9325.784206		61.85817719	793.5726643	9698.768139
	64.49913979	823.7278461	11536.80205		78.14598083	820.679903	9305.97806		65.92011452	809.874773	9786.394119
	65.07539749	838.1927013	11074.94187		78.34219933	842.274189	9259.834051		62.20388412	790.9431458	9644.97304
	66.96796417	824.5482445	11629.54068		77.60095596	821.5620518	9238.424778		63.77196312	806.055069	9816.109896
	66.97702408	831.6590786	11413.00702		77.064991	835.3250027	9095.563173		63.50684166	768.4276104	9559.106112
	63.74502182	796.1268425	10919.61598		78.82595062	816.3130283	9030.481815		62.66021729	775.8820057	9524.078131
	64.66603279	796.0939407	10857.28621		76.97176933	815.4990673	9123.358965		62.68310547	768.3768272	9530.166626
	63.95316124	788.8469696	10871.26207		77.01706886	827.1951675	9036.007881		63.22813034	772.9611397	9553.287983
	61.69104576	795.9671021	11066.93697		77.65197754	813.7979507	9184.519053		62.67404556	773.3259201	9674.375057
	61.88702583	797.369957	10861.99188		76.94530487	824.2387772	9067.831039		63.31586838	779.1452408	9836.696863
	63.6408329	912.79006	12259.28974		77.71205902	833.0178261	9167.917252		62.48903275	774.2168903	9622.893095
	72.08490372	943.7520504	11422.62673		76.9071579	826.3020515	9140.130043		61.72513962	780.5790901	9638.7043
	64.35322762	804.48699	11085.03389		75.58727264	840.3749466	9176.163673		63.25817108	782.3119164	9591.579914
	64.22019005	801.0649681	11123.18492		77.02898979	826.9281387	9262.191772		65.84310532	818.2218075	9905.44486
Average	64.7876819	820.7049529	11343.45207		78.20568085	833.1008434	9215.810235		63.19564184	787.356178	9691.507538
Standard Dev.	2.997809894	33.42104977	489.8301426		1.559797884	17.0134694	126.5057754		1.588319533	16.34901006	130.8734824