		Bubble Sort	Selection Sort	Insertion Sort	Merge Sort	Quick Sort	Heap Sort
TASK 1							
n = 100							
sorted input							
	no. steps	107	15545	1091	7000	16534	12689
	CPU time	0	38	2	10	13	10
reverse sort							
	no. steps	25249	17995	25841	6920	26534	10540
	CPU time	16	13	9	8	7	6
random permutation							
	no. steps	14691	15862	12281	7370	4844	11765
	CPU time	37	33	3	9	6	11
n = 300							
sorted input							
	no. steps	307	136645	3291	24816	139634	48287
	CPU time	1	282	0	34	138	26
reverse sort							
	no. steps	225749	158995	227541	24560	229634	41106
	CPU time	168	164	71	30	67	21
random permutation							
	no. steps	133574	137939	111141	26384	15956	44936
	CPU time	141	235	40	36	21	36
500							
n = 500							
sorted input	no otono	F07	277745	E404	42044	382734	87895
	no. steps	507			43944		
reverse sort	CPU time	2	705	2	45	368	55

	no. steps	626249	1754995	629241	43832	632734	76205
	CPU time	3396	376	259	55	160	37
random permutation							
	no. steps	372148	380062	311391	47098	29068	82451
	CPU time	470	3549	101	52	32	65
n = 1000							
sorted input							
	no. steps	1007	1505495	10991	95904	1515484	197395
	CPU time	2	3292	4	137	1291	111
reverse sort							
	no. steps	2502499	1754995	2508491	95680	2515484	172668
	CPU time	1755	1593	632	119	583	70
random permutation							
	no. steps	1474024	1510679	1225521	103132	60231	186778
	CPU time	868	2555	340	145	91	126
n = 3000							
sorted input							
	no. steps	3007	13516495	32991	328464	13546484	700075
	CPU time	5	43937	14	495	21798	184
reverse sort							
	no. steps	22507499	43774995	22525491	325968	22546484	621354
	CPU time	29505	22478	11959	470	17004	462
random permutation							660583
	no. steps	13298386	13536206	10987606	354056	267285	314662
	CPU time	7202	22929	2612	766	389	538

n = 5000							
sorted input							
	no. steps	5007	37527495	54991	576648	37577484	1246529
	CPU time	15	115786	24	776	59542	431
reverse sort							
	no. steps	62512499	175049995	62542491	572248	62577484	1115350
	CPU time	80823	84235	86162	548	65736	381
random permutation							
	no. steps	36610492	37562608	30069106	623002	407005	1182485
	CPU time	28150	113485	7455	749	797	775
n = 10000							
sorted input							
	no. steps	10007	150054995	109991	1233312	150154984	2709315
	CPU time	25	489808	46	5783	295247	1071
reverse sort							
	no. steps	250024999	4375249995	250084991	1224512	250154984	2445292
	CPU time	517522	310316	125590	2921	121145	918
random permutation							
	no. steps	145658520	150133002	121470281	1336252	912257	2578288
	CPU time	483961	573541	88959	7678	1555	5191
n = 50000							
sorted input							
	no. steps	50007	3750274995	549991	7095136	3750774984	16027219
	CPU time	126	7161586 µs	234	19501	7161586	5650
reverse sort							
	no. steps	6250124999	175049995	6250424991	7056256	6250774984	14711510
	CPU time	9426046	7536945	4282387	34606	3270630	5397

random permutation							
	no. steps	3938749045	3750746532	3362266891	7722160	5286182	15280212
	CPU time	11251716	13193352	1781988	20901	8327	12215
TASK 2							
n = 100							
	total time	408 µs	684 µs	0 μs	331 µs	1158 µs	323 µs
	avg time	8 µs	13 µs	0 μs	6 µs	23 µs	6 µs
	total steps	616500	1264750	29700	191850	1272200	313500
	avg steps	12330	25295	594	3837	4433	6270
n = 300							
	total time	5012 μs	6177 µs	5 µs	1908 µs	8221 µs	1518 µs
	avg time	100 µs	123 µs	0 μs	38 µs	164 µs	30 µs
	total steps	5765200	11294750	89700	682650	11317200	1182900
	avg steps	115304	225895	1794	13653	16351	23658
n = 500							
	total time	13405 µs	21584 µs	42 µs	1605 µs	51263 µs	2720 µs
	avg time	268 μs	431 µs	0 μs	32 µs	1025 μs	54 µs
	total steps	15236950	31324750	149700	1210850	31362200	2145100
	avg steps	304739	626495	2994	24217	29400	42902
n = 1000							
11 – 1000	total time	145166 µs	141787 µs	88 µs	4996 μs	194752 µs	5754 μs

avg time	2903 µs	2835 μs	1 µs	99 µs	3895 µs	115 µs
total steps	60749400	125149750	299700	2647050	125224700	4794100
avg steps	1214988	2502995	5994	52941	66409	95882
total time	1182908 µs	1046478 μs	357 µs	12394 µs	1839866 µs	23182 µs
avg time	23658 µs	20929 μs	7 µs	247 µs	36797 µs	463 µs
total steps	563261170	1125449750	899700	9084250	1125674700	16916100
avg steps	11265223	22508995	17994	181685	232959	338332
total time	3206661 µs	3538282 µs	641 µs	21210 µs	5870214 μs	75164 µs
avg time	64133 µs	70765 µs	12 µs	424 µs	117404 µs	1503 µs
total steps	1564678924	3125749750	1499700	15961450	3126124700	30095200
avg steps	31293578	62514995	29994	319229	403196	601904
total time	16920707 µs	14695909 µs	1632 µs	52050 μs	23194806 µs	158127 µs
avg time	338414 µs	293918 μs	32 µs	1041 μs	463896 µs	3162 µs
total steps	6250034307	12501499750	2999700	34173250	12502249700	65243000
avg steps	125000686	250029995	59994	683465	889949	1304860
total time	571022600	360604409 1/2	12727	444070 40	570045242 uc	1200406
	· · · · · · · · · · · · · · · · · · ·	-	-			1289496 µs
-		-	-	-		25789 µs
avg steps	156229409002 3124588180	312507499750 6250149995	14999700 299994	196990050 3939801		383140000 7662800
	total steps avg steps total time avg time total steps avg steps total time avg time total steps avg steps total steps avg steps	total steps 60749400 avg steps 1214988 total time 1182908 µs avg time 23658 µs total steps 563261170 avg steps 11265223 total time 3206661 µs avg time 64133 µs total steps 1564678924 avg steps 31293578 total time 16920707 µs avg time 338414 µs total steps 6250034307 avg steps 125000686 total time 571022609 µs avg time 11420452 µs total steps 156229409002	total steps 60749400 125149750 avg steps 1214988 2502995 total time 1182908 µs 1046478 µs 20929 µs total steps 563261170 1125449750 avg steps 11265223 22508995 total time 3206661 µs 3538282 µs 70765 µs 41265223 32508995 total steps 1564678924 3125749750 avg steps 31293578 62514995 total time 16920707 µs 14695909 µs avg time 338414 µs 293918 µs total steps 6250034307 12501499750 avg steps 125000686 250029995 total time 571022609 µs 360604498 µs avg time 11420452 µs 7212089 µs total steps 625903409002 312507499750	total steps 60749400 125149750 299700 avg steps 1214988 2502995 5994 total time 1182908 µs 1046478 µs 357 µs 20929 µs 7 µs total steps 563261170 1125449750 899700 avg steps 11265223 22508995 17994 total time 3206661 µs 3538282 µs 641 µs 22508995 17994 total time 3206661 µs 3538282 µs 641 µs 12 µs 12 µs 1564678924 3125749750 1499700 avg steps 31293578 62514995 29994 total time 16920707 µs 14695909 µs 1632 µs avg time 338414 µs 293918 µs 32 µs 1041 steps 6250034307 12501499750 2999700 avg steps 125000686 250029995 59994 total time 571022609 µs 360604498 µs 12727 µs avg time 11420452 µs 7212089 µs 254 µs total steps 156229409002 312507499750 14999700	total steps 60749400 125149750 299700 2647050 avg steps 1214988 2502995 5994 52941 total time 1182908 µs 1046478 µs 357 µs 12394 µs avg time 23658 µs 20929 µs 7 µs 247 µs total steps 563261170 1125449750 899700 9084250 avg steps 11265223 22508995 17994 181685 total time 3206661 µs 3538282 µs 641 µs 21210 µs avg time 64133 µs 70765 µs 12 µs 424 µs total steps 1564678924 3125749750 1499700 15961450 avg steps 31293578 62514995 29994 319229 total time 16920707 µs 14695909 µs 1632 µs 52050 µs avg time 338414 µs 293918 µs 32 µs 1041 µs total steps 6250034307 12501499750 2999700 34173250 avg steps 125000686 250029995 59994 683465 total time 571022609 µs 360604498 µs 12727 µs 444979 µs avg time 11420452 µs 7212089 µs 254 µs 8899 µs total steps 156229409002 312507499750 14999700 196990050	total steps 60749400 125149750 299700 2647050 125224700 avg steps 1214988 2502995 5994 52941 66409 total time 1182908 µs 1046478 µs 357 µs 12394 µs 1839866 µs avg time 23658 µs 20929 µs 7 µs 247 µs 36797 µs total steps 563261170 1125449750 899700 9084250 1125674700 avg steps 11265223 22508995 17994 181685 232959 total time 3206661 µs 3538282 µs 641 µs 21210 µs 5870214 µs avg time 64133 µs 70765 µs 12 µs 424 µs 117404 µs total steps 1564678924 3125749750 1499700 15961450 3126124700 avg steps 31293578 62514995 29994 319229 403196 total time 16920707 µs 14695909 µs 1632 µs 52050 µs 23194806 µs avg time 338414 µs 293918 µs 32 µs 1041 µs 463896 µs total steps 6250034307 12501499750 2999700 34173250 12502249700 avg steps 125000686 250029995 59994 683465 889949 total time 571022609 µs 360604498 µs 12727 µs 444979 µs 579945343 µs avg time 11420452 µs 7212089 µs 254 µs 8899 µs 1159806 µs total steps 156229409002 312507499750 14999700 196990050 312511249700