Q9

selectionSort [random set]			
sample size (n)	time in (ms)		
1000	1		
6000	60.05		
11000	203.05		
16000	429.9		
21000	739.15		
26000	1132.8		
31000	1610.05		
36000	2172.65		
41000	2817		
46000	3550.7		
51000	4356.4		
56000	5252.55		
61000	6241.55		
66000	7327.2		
71000	8475.65		

selectionSort [reversed sorted set]		
sample size (n)	time in (ms)	
1000	2	
6000	62.2	
11000	207	
16000	436.05	
21000	747	
26000	1143.7	
31000	1624.85	
36000	2190.85	
41000	2835.75	
46000	3566.05	
51000	4381	
56000	5284.1	
61000	6276.65	
66000	7337.7	
71000	8467.6	

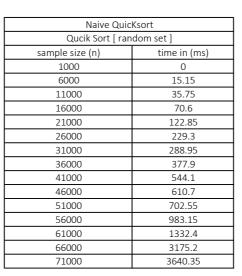
Optimized QuicKsort		
Qucik Sort [random set]		
sample size (n)	time in (ms)	
1000	0	
6000	10.25	
11000	23.8	
16000	43.2	
21000	69.6	
26000	104.6	
31000	145.2	
36000	196.4	
41000	302.95	
46000	329.65	
51000	406.5	
56000	507.05	
61000	596.1	
66000	1553.5	
71000	1828.15	

Optimized QuicKsort			
Qucik Sort [reversed sorted set]			
sample size (n)	time in (ms)		
1000	0		
6000	10.6		
11000	29.25		
16000	56.35		
21000	93.65		
26000	140.6		
31000	196.95		
36000	262.95		
41000	406.45		
46000	426		
51000	524.25		
56000	642.2		
61000	776.35		
66000	1758.5		
71000 2048.25			

REPORT based on			
	MIN	MAX	
ELEMENT VALUE	1	100	
Sample size	1000	100000	
Sets to test	20		
Sample size step	5000		
·			

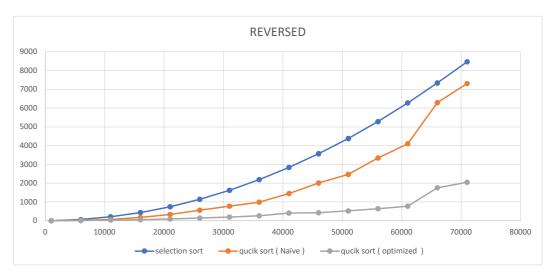
RANDOM	SET

sample size	selection sort	qucik sort (Naïve)	qucik sort (optimized)
1000	1	0	0
6000	60.05	15.15	10.25
11000	203.05	35.75	23.8



Naive QuicKsort		
Qucik Sort [reversed sorted set]		
sample size (n) time in (ms)		
1000	0	
6000	18.1	
11000	59.7	
16000	177.95	
21000	335.1	
26000	557.75	
31000	772.7	
36000	988.55	
41000	1448.3	
46000	2007.35	
51000	2467.9	
56000	3342.05	
61000	4100.85	
66000	6290.3	
71000	7306.5	





16000	429.9	70.6	43.2
21000	739.15	122.85	69.6
26000	1132.8	229.3	104.6
31000	1610.05	288.95	145.2
36000	2172.65	377.9	196.4
41000	2817	544.1	302.95
46000	3550.7	610.7	329.65
51000	4356.4	702.55	406.5
56000	5252.55	983.15	507.05
61000	6241.55	1332.4	596.1
66000	7327.2	3175.2	1553.5
71000	8475.65	3640.35	1828.15

REVERSED

sample size	selection sort	qucik sort (Naïve)	qucik sort (optimized)
1000	2	0	0
6000	62.2	18.1	10.6
11000	207	59.7	29.25
16000	436.05	177.95	56.35
21000	747	335.1	93.65
26000	1143.7	557.75	140.6
31000	1624.85	772.7	196.95
36000	2190.85	988.55	262.95
41000	2835.75	1448.3	406.45
46000	3566.05	2007.35	426
51000	4381	2467.9	524.25
56000	5284.1	3342.05	642.2
61000	6276.65	4100.85	776.35
66000	7337.7	6290.3	1758.5
71000	8467.6	7306.5	2048.25