**MergeSort**

For 10000;

Random : 3, 1, 0, 1, 1, 1, 1, 1, 1, 2, 1, 2, 1, 1, 1, 1, 1, 1, 1, 0

Sorted: 2

Average: 1,142

For 40000;

Random : 7, 3, 6, 4, 6, 5, 9, 9, 11, 8, 10, 13, 9, 10, 7, 5, 9, 8, 13, 9

Sorted: 12

Average: 8,238

For 100000;

Random : 14, 10, 9, 9, 9, 33, 33, 31, 13, 13, 13, 13, 12, 11, 10, 11, 9, 8, 20, 23

Sorted: 14

Average: 15,142

For 150000;

Random : 26, 15, 17, 12, 16, 38, 53, 29, 11, 43, 19, 17, 126, 14, 12, 10, 18, 10, 53, 32

Sorted: 19

Average: 28,095

For 180000;

Random : 35, 23, 20, 22, 15, 80, 38, 14, 79, 15, 57, 29, 15, 16, 16, 19, 15, 15, 17, 16

Sorted: 26

Average: 27,714

**QuickSort**

For 10000;

Random : 3, 1, 1, 1, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 0, 1, 1, 0, 0, 0

Sorted: 19

Average: 1,476

For 40000;

Random : 7, 3, 19, 9, 9, 10, 9, 8, 2, 2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1

Sorted: 43

Average: 6,238

For 100000;

Random : 13, 7, 15, 27, 20, 31, 19, 26, 25, 36, 18, 3, 4, 3, 3, 3, 3, 2, 2, 3

Sorted: 155

Average: 19,904

For 150000;

Random : 18, 43, 44, 65, 32, 36, 5, 4, 4, 4, 6, 4, 4, 5, 4, 5, 5, 5, 4, 4

Sorted: 321

Average: 29,619

For 180000;

Random : 36, 7, 4, 6, 5, 7, 6, 14, 6, 7, 5, 6, 5, 6, 5, 5, 5, 6, 6, 5

Sorted: 582

Average: 34,945

**SelectionSort**

For 10000;

Random : 22, 16, 1, 2, 2, 1, 1, 2, 1, 0, 1, 2, 1, 1, 2, 1, 1, 1, 1, 1

Sorted: 20

Average: 3,809

For 40000;

Random : 80, 45, 22, 16, 21, 14, 25, 21, 18, 20, 21, 25, 33, 24, 18, 24, 17, 20, 19, 20

Sorted: 102

Average: 28,809

For 100000;

Random : 207, 263, 136, 150, 105, 137, 114, 115, 128, 149, 154, 167, 81, 81, 81, 83, 83, 83, 82, 84

Sorted: 174

Average: 126,523

For 150000;

Random : 485, 361, 321, 318, 271, 187, 190, 206, 202, 195, 187, 186, 207, 189, 188, 185, 187, 191, 185, 187

Sorted: 278

Average: 233,619

For 180000;

Random : 623, 533, 504, 304, 291, 321, 293, 288, 297, 292, 303, 349, 351, 347, 363, 351, 286, 308, 324, 331

Sorted: 428

Average: 356,523

**BubbleSort**

For 10000;

Random : 49, 6, 14, 4, 3, 3, 3, 4, 5, 3, 4, 4, 5, 4, 5, 5, 6, 5, 5, 3

Sorted: 0

Average: 6,6

For 40000;

Random : 150, 113, 119, 79, 77, 78, 84, 74, 101, 98, 94, 89, 90, 110, 112, 126, 108, 127, 62, 62

Sorted: 1

Average: 93,047

For 100000;

Random : 756, 759, 534, 502, 458, 502, 491, 464, 476, 460, 453, 459, 518, 456, 464, 460, 464, 542, 471, 463

Sorted: 2

Average: 583,523

For 150000;

Random : 1616, 1177, 919, 1061, 1077, 914, 941, 927, 1056, 913, 1057, 1162, 1041, 1040, 1036, 1060, 1055, 1049, 1161, 1059

Sorted: 2

Average: 1015,380

For 180000;

Random : 2191, 1402, 1339, 1387, 1394, 1353, 1417, 1340, 1340, 1456, 1346, 1340, 1498, 1343, 1338, 1651, 1378, 1380, 1640, 1387

Sorted: 2

Average: 1377,238

**InsertionSort**

For 10000;

Random : 10, 20, 30, 4, 2, 3, 1, 2, 1, 1, 1, 2, 1, 3, 2, 1, 1, 1, 0, 0

Sorted: 0

Average: 4,095

For 40000;

Random : 88, 13, 17, 16, 17, 20, 17, 22, 29, 19, 25, 39, 36, 46, 21, 18, 22, 21, 17, 19

Sorted: 1

Average: 24904

For 100000;

Random : 223, 239, 159, 97, 75, 158, 156, 123, 99, 135, 126, 116, 169, 67, 69, 111, 72, 100, 68, 72

Sorted: 2

Average: 116

For 150000;

Random : 554, 283, 422, 359, 341, 179, 183, 178, 272, 173, 178, 235, 181, 182, 179, 222, 176, 213, 265, 177

Sorted: 2

Average: 235,904

For 180000;

Random : 745, 367, 722, 296, 245, 245, 300, 234, 236, 369, 266, 346, 537, 366, 313, 580, 309, 295, 495, 273

Sorted: 2

Average: 359,095

**ShellSort**

For 10000;

Random : 2, 2, 2, 2, 2, 2, 2, 2, 2, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0

Sorted: 1

Average: 1,095

For 40000;

Random : 5, 8, 1, 1, 2, 1, 2, 2, 1, 1, 1, 2, 2, 2, 2, 1, 2, 2, 2, 2

Sorted: 4

Average: 2,194

For 100000;

Random : 16, 5, 5, 6, 4, 4, 3, 3, 3, 3, 5, 4, 4, 3, 6, 3, 3, 4, 6, 3

Sorted: 10

Average: 4,904

For 150000;

Random : 26, 5, 5, 7, 5, 5, 6, 6, 13, 4, 7, 4, 4, 5, 5, 4, 4, 7, 4, 4

Sorted: 12

Average: 6,761

For 180000;

Random : 28, 5, 5, 6, 6, 11, 6, 6, 7, 5, 6, 7, 5, 5, 8, 6, 6, 7, 5, 6

Sorted: 15

Average: 7,6

**HeapSort**

For 10000;

Random : 3, 4, 4, 2, 2, 2, 2, 1, 1, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 0

Sorted: 5

Average: 1,619

For 40000;

Random : 15, 9, 6, 5, 5, 5, 3, 3, 3, 2, 2, 1, 1, 2, 2, 4, 2, 0, 0, 0

Sorted: 18

Average: 4,19

For 100000;

Random : 23, 8, 10, 5, 5, 5, 4, 4, 4, 3, 4, 3, 3, 3, 3, 4, 4, 2, 2, 2

Sorted: 32

Average: 6,3

For 150000;

Random : 31, 17, 7, 9, 7, 5, 5, 6, 13, 11, 10, 6, 5, 6, 6, 4, 7, 6, 6, 4

Sorted: 43

Average: 10,190

For 180000;

Random : 47, 36, 10, 11, 7, 9, 7, 8, 11, 10, 7, 14, 9, 7, 9, 7, 7, 6, 5, 7

Sorted: 54

Average: 13,714