

Sorting algorithms	10 elements			100 elements			1000 elements		
	random	sorted	reverse	random	sorted	reverse	random	sorted	reverse
Bubble_sort	600	400	600	23000	12700	14800	1724600	1188400	2029700
Insertion_sort	600	300	400	700	600	800	676100	3500	744600
Merge_sort	1000	1000	1200	7600	6200	7600	109900	61100	104500

When the number of elements is small, such as 10, the time complexity is not stable, and there is no significant difference between different algorithms. When the number of tests increases to 1000, we can find that the order of input affects the sorting speed, especially for bubble sorting and insertion sorting. Sorting arrays takes the lowest time (close to $O(n)$), while reverse sorting array order takes the most time. (nearly $O(n^2)$). Merge sort has become the fastest and time-consuming ($O(n\log n)$) algorithm among the algorithms.