

## BUBBLE SORT AND SELECTION SORT TABLE:-

n	count	count/n	count/n^2	count/n^3
3	3	1	0.33	0.111
5	10	2	0.4	0.08
9	36	4	0.44	0.049
12	66	5.5	0.45	0.038
18	153	8.5	0.47	0.026

Here as we can see count/n^2 column is constant. Hence efficiency is  $n^2$ .

## MERGE SORT TABLE:-

N	count	count/n	count/n^2	count/nlogn
3	10	3.33	1.11	6.979
6	32	5.33	0.888	6.84
9	58	6.44	0.715	6.74
12	88	7.33	0.6108	6.79

Here the constant table is count/nlogn. Hence the efficiency is  $n \log n$ .

## QUICK SORT TABLE:-

N	count	count/n	count/n^2	count/nlogn
3	4	1.33	0.44	2.787
6	26	4.33	0.722	5.56
9	60	6.66	0.74	6.98
12	107	8.91	0.74	8.26

As we can see here the constant column is count/n^2. Hence the efficiency is  $n^2$ .