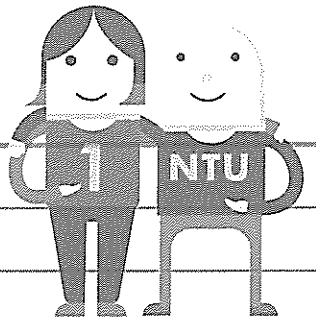
~~worst case~~ disproved next page



5 keyCmp (continued)

num of larger and smaller keys evenly distributed across both halves

1 | 1 vs 2, 3 vs 2, 3 vs 4

①	1	3	2	4
②	1	3	4	2
③	3	1	2	4
④	3	1	4	2

1 from larger, 1 from smaller | 1 from larger, 1 from smaller

2 | 1 vs 2, 4 vs 2, 4 vs 3

①	1	4	2	3
②	1	4	3	2
③	4	1	2	3
④	4	1	3	2

$\frac{n}{4}$ large, $\frac{n}{4}$ small | $\frac{n}{4}$ large, $\frac{n}{4}$ small

3 | 2 vs 1, 2 vs 4, 3 vs 4

①	2	3	1	4
②	2	3	4	1
③	3	2	1	4
④	3	2	4	1

4 | 2 vs 1, 2 vs 3, 4 vs 3

①	2	4	1	3
②	2	4	3	1
③	4	2	1	3
④	4	2	3	1

(n=4) $\frac{n}{2}$ $\frac{n}{2}+1$

possible number of keyCmp at 1 merge: 2, 3

2) keyCmp - 2 combinations of 4 permutations → 8 permutations

3) keyCmp - 4 combinations of 4 permutations → 16 permutations

↳ 2x2 (swap order of subarray)