江承紘
下午1:07
54321-> 12345 (dist = 3 * 5 - 2 = 13)
54321 -> the other permutations: (dist < 13)
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下午1:10
Need to prove: for all 123...n to n...321 dist = 3n - 2
Maybe contradiction?
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下午1:11
$\leq$ 3n -2: finish proof
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下午1:14
[5] (dist = 12): 54321 -> 52143, 54321 -> 51234
{This may be incorrect...}
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下午1:16
https://en.cppreference.com/w/cpp/algorithm/next_permutation
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下午1:20
Guess: 654321 -> (the maximum distance) -> 6 _ _ _ _ _
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下午1:21
5 disk:
54321 -> any permutation
max dist = 13
We guess: 6 disk
654321 -> any permutation
max dist = 13 + 6
move to another pg
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下午1:23
(n-1 disk) 1 -> 3
(n th) 1 -> 2
(n-1 disk) 3 -> 2
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下午1:26
5 disk: max dist = 12 -> 6 disk: max dist = 15
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下午1:32
1. 3n - 2 correct?
2. Can we find properties to help proving 3n - 2?
江承紘
下午1:54
$f(n) = 2f(n/2) + O(n)$
Wing-Kai Hon
下午2:01
$f(n) = f(n/3) + f(2n/3) + O(n)$
Wing-Kai Hon
下午2:02
$f(n) = 2f(n/2) + 1.5n$
$g(n) = g(n/3) + g(2n/3) + n$
$1.5n \log_2 n$ vs $n \log_{1.5} n$
Wing-Kai Hon
下午2:04
$g(n) = g(n/3) + g(2n/3) + 4/3 n$
$h(n) = h(tn) + h((1-t)n) + (1+t)n$