DIV2-E DIV1-C Lucky Different:

As you probably know, the number of lucky numbers in range $[1;10^9]$ is 1022. We use this fact to solve problem. Let $C[i]$ - number of occurrences of i-th lucky number in array a. Now we schould calculate DP with parameters DP[pos][cnt] - what is the number of subsequences that we use lucky numbers up to *pos*-th and our subsequence contains exactly *cnt* lucky number. If we are on state DP[pos][cnt] we can do two things: do not use *pos*-th lucky number (and do DP[pos+1][cnt] += DP[pos][cnt]) or use *pos*-th lucky (and do DP[pos+1][cnt+1] += DP[pos][cnt]*C[pos], because you have C[pos] of *pos*-th lucky number).

Now we need to find total result. To do that we iterate through the number of lucky numbers in our subsequence i. Then you need to multiple that number by $C(count_{unlucky}, k - i)$ (bin. coefficient), where $count_{unlucky}$ - number of unlucky numbers of sequence. Sum for all such i will be the total result.

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