CCC 15 S5.

Let dp[i][j][k][0] be the answer to using
- First i fixed pies
- Smallest j added pies
- Largest k added pies, last pie is NOT picked.

dp[i][j][k][1]: Same first 3 conditions, last pie USED.

From dp[i][j][k][0] to smaller states
Case work on removed pie
Case 1: don't choose fixed i ⇒ dp[i-1][j][k][1], ··· [0]
⇒ dp[i][j-1][k][1] ··· [0]
dp[i][j][k-1][1] ··· [0]
Analogously

dp[i][j][k][1] ⇒ dp[i-1][j][k][0] + a[i]
dp[i][j-1][k][0] + b[j].
dp[i][j][k-1][0] + b[M-k].

(In the 50 / 50 case, sometimes picking 0 is better in dp[·][·][·][0]).