#include <bits/stdc++.h>

using namespace std;

/\*Let us assume an array of coins of size n and n must be even\*/

int GameStrategy(int\* array, int m)

{

int table[m][m];

// Usage of recursive formula in table F(i+2, j),F(i, j-2) and F(i+1, j-1) where i and j are first and last position denote the whole value with x,y and z.

for (int gap = 0; gap < m; ++gap) {

for (int i = 0, j = gap; j < m; ++i, ++j) {

int a = ((i + 2) <= j) ? table[i + 2][j] : 0;

int b = ((i + 1) <= (j - 1)) ? table[i + 1][j - 1] : 0;

int c = (i <= (j - 2)) ? table[i][j - 2] : 0;

table[i][j] = max(array[i] + min(a, b), array[j] + min(b, c));

}

}

return table[0][m - 1];

}

int main()

{

int array1[] = { 15,8 , 7, 3 };

int m = sizeof(array1) / sizeof(array1[0]);

printf("%d\n", GameStrategy(array1, m));

int array2[] = { 10,20,3,4 };

m = sizeof(array2) / sizeof(array2[0]);

printf("%d\n", GameStrategy(array2, m));

return 0;

}

**OUTPUT:**

22

42