

```
1  #include <bits/stdc++.h>
2  using namespace std;
3
4  typedef long long int ll;
5
6  main(){
7      ios base::sync with stdio(0);
8      cin.tie(0);
9      ll z,n;
10     cin >> z;
11     for(int k=0;k<z;k++){
12         cin >> n;
13         ll nr = n << 1;
14         ll M[nr][nr];
15         for(int i=0;i<n;i++){
16             for(int j=0;j<n;j++){
17                 cin >> M[i][j];
18                 M[i+n][j] = M[i][j];
19                 M[i][j+n] = M[i][j];
20                 M[i+n][j+n] = M[i][j];
21                 if(i>0) M[i][j] += M[i-1][j];
22                 if(j>0) M[i][j] += M[i][j-1];
23                 if(i>0 && j>0) M[i][j] -= M[i-1][j-1];
24             }
25         }
26         for(int i=0;i<nr;i++){
27             for(int j=0;j<nr;j++){
28                 if((i>=n or j>=n)){
29                     if(i>0){
30                         M[i][j] += M[i-1][j];
31                     }
32                     if(j>0){
33                         M[i][j] += M[i][j-1];
34                     }
35                     if(i>0 && j>0){
36                         M[i][j] -= M[i-1][j-1];
37                     }
38                 }
39             }
40         }
41         ll ans = -1000*100*100;
42         int xi,yi,xf,yf;
43         for(int i=0;i<n;i++){
44             for(int j=0;j<n;j++){
45                 for(int x=i;x<i+n;x++){
46                     for(int y=j;y<j+n;y++){
47                         ll at = M[x][y];
48                         if(i>0) at -= M[i-1][y];
49                         if(j>0) at -= M[x][j-1];
50                         if(i>0 and j>0) at += M[i-1][j-1];
51                         ans = max(ans,at);
52                         if(ans == at){
53                             xi = i;
54                             yi = j;
55                             xf = x;
56                             yf = y;
57                         }
58                     }
59                 }
60             }
61         }
62         if(xi==0 and yi==0 and ((xf==nr-1 and yf==n-1) or (xf==n-1 and yf==nr-1)))
63             ans -= M[n-1][n-1];
64         cout << ans << endl;
65         //cout << "COORD I:  " << xi << " " << yi << endl;
66         // << "COORD F:  " << xf << " " << yf << endl;
67     }
68 }
69
```