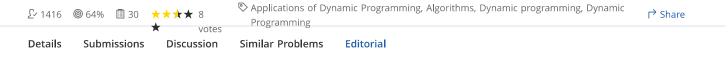


All Tracks > Problem

Butterfly effect □



N/A

Author's Solution

```
#include <bits/stdc++.h>
#define ll long long
using namespace std;
const 11 \text{ MAX} = 1e5 + 5, MOD = 1e9 + 7;
11 dp[MAX][10];
ll solve(ll i, ll p, ll &n, ll &k, ll &x){
    if(i == n)return 1;
    11 &ans = dp[i][p];
    if(ans != -1)return ans;
    ans = 0;
    for(int j = 1; j <= k; j++){
         if(j != p){
              ans += solve(i + 1, j, n, k, x);
              ans %= MOD;
    }
    if(p == x)ans += solve(i + 1, p, n, k, x);
    return ans;
int main()
{
      freopen("in.txt", "r", stdin);
freopen("out.txt", "w", stdout);
//
    11 t;
    cin >> t;
    while(t--){
         memset(&dp, -1, sizeof dp);
         11 n, k, x;
         cin >> n >> k >> x;
         ll ans = 0;
         for(int i = 1; i <= k; i++){
              ans += solve(1, i, n, k, x);
              ans %= MOD;
         }
         cout << ans << endl;</pre>
    }
    return 0;
```

Tester's Solution

```
#include<bits/stdc++.h>
#define Mod 1000000007
#define lld long long
using namespace std;
lld dp[100010];
int main()
         //freopen("input.txt","r",stdin);
//freopen("output.txt","w",stdout);
         int t;
         cin>> t;
         while(t-- )
                  int n,x,k;
                  cin>> n>>k>>x;
                  for(int i = 1; i<= n; i++ ) dp[i]=0;
                  dp[0] =1;
                  dp[1] = k; // only one point on x-axis k- ways to color them
                  lld val = 1;
                  for(int i = 2; i<= n; i++ )
                            dp[i] = (dp[i-1]*1LL* (k-1)) %Mod;
if(x<= k) dp[i]= (dp[i]+dp[i-2])%Mod;</pre>
                  cout<<dp[n] <<endl;</pre>
         return 0;
}
```