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406410114   UVA10056 What is the Probability?
//S  input num
//N  player num
//  1/6 = 6/36   5/6*1/6 = 5/36
//
#include <bits/stdc++.h>
using namespace std;

#define les 1e-5
double cal_prob( int playernum , double prob, int player_index   ){
        if (prob ==0  )
                return 0;
        int i,j,k ;
        double win_event[1001],sum_prob = 0,result;
        for ( i = 1 ; i <=playernum ;i++ ){
                win_event[i] = pow( (double)(1-prob),i-1 ) * prob;
                //cout << " win_event[i] : "<<win_event[i]<<endl;
        }//for
        for ( i = 1;i<=playernum;i++ )
                sum_prob +=win_event[i];
        //cout << "sum_prob : "<<sum_prob<<endl;

        //cout << "result : " <<win_event[player_index]/sum_prob<<endl;
        return (double)win_event[player_index]/sum_prob;
}//cal_prob

int main(){
        int n,i,j,k,playernum,player_index;
        double prob,result;

        cin >> n;
        for ( i = 0;i<n;i++ ){
                cin >> playernum >>  prob >> player_index;
                double result = cal_prob( playernum ,prob, player_index );
                if ( result <les  )
                        cout << "0.0000" <<endl;
                else
                        printf("%.4lf\n",result);

        }//for

        return 0;
}//main
```