Whacky Workouts - Hackerearth

The Code:

```c
#include <stdio.h>
#include <math.h>


#define MOD 1000000007;
long long int a,b,c,d;

void fast_fib(long long int n,long long int ans[])
{
   if(n == 0)
   {
      ans[0] = 0;
      ans[1] = 1;
      return;
   }
   fast_fib((n/2),ans);
   a = ans[0];          /* F(n) */
   b = ans[1];          /* F(n+1) */
   c = 2*b - a;
   if(c < 0)
      c += MOD;
   c = (a * c) % MOD;      /* F(2n) */
   d = (a*a + b*b) % MOD;  /* F(2n + 1) */
   if(n%2 == 0)
   {
      ans[0] = c;
      ans[1] = d;
   }
   else
   {
      ans[0] = d;
      ans[1] = c+d;
   }
}

int main(){
   int num;
   scanf("%d", &num);
   long long int days;
   long long int ans[2]={0};

   while(num > 0){
```

```c
        scanf("%lld", &days);

        ans[0] = 0; ans[1] = 0;
        fast_fib(days+2,ans);

        printf("%lld\n", ans[0]);

        num--;
    }
}
```

The stats:

Score
10.0

Time (sec)
0.65824

Memory (KiB)
64

Language
C