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**Class: DWWC-43**

**Subject: DSA**

**Domain Winning Camp Worksheet (Practice Questions)**

**Subject: IT Skills Day 1:**

**QUESTION-1: Important Page CODE:**

```
#include <iostream>
using namespace std; int
main() {
    // your code goes
    here    int a,b;
    cin>>a>>b;
    if(a==0)
        cout<<"https://www.codechef.com/practice"<<endl;
        else if(a==1&&b==0)
            cout<<"https://www.codechef.com/contests"<<endl;
        else{
            cout<<"https://discuss.codechef.com"<<endl;
        }
    return 0;
}
```

**OUTPUT:**


Test against Custom Input

0 1

Problem Solver Badge 66 / 250

Solve 184 more problems to get Silver Badge

Next Problem

Status:  Correct Answer

Submission ID: [84158992](#)

Time:  
0.00s

**QUESTION-2:** Kingdom of Fire and Ice **CODE:**

```
#include <stdio.h>
#include<inttypes.h>
```

```
/* Anubhav Tyagi */
```

```
void multiply(uint64_t F[2][2], uint64_t M[2][2],uint64_t k);
```

```
void power(uint64_t F[2][2], uint64_t n,uint64_t k);
```

```
uint64_t fib(uint64_t n,uint64_t k)
{
    uint64_t F[2][2] = {{1,1},{1,0}};
    if (n == 0)
        return 0;
    power(F, n-1,k);
    return F[0][0];
}
```

```
void power(uint64_t F[2][2], uint64_t n,uint64_t k)
{
    if( n == 0 || n == 1)
        return;
```

```

uint64_t M[2][2] = {{1,1},{1,0}};

power(F, n/2,k);
multiply(F, F,k);

if (n%2 != 0)
    multiply(F, M, k);
}

void multiply(uint64_t F[2][2], uint64_t M[2][2],uint64_t k)
{
    uint64_t x = (F[0][0]*M[0][0] + F[0][1]*M[1][0])%k;
    uint64_t y = (F[0][0]*M[0][1] + F[0][1]*M[1][1])%k;
    uint64_t z = (F[1][0]*M[0][0] + F[1][1]*M[1][0])%k;
    uint64_t w = (F[1][0]*M[0][1] + F[1][1]*M[1][1])%k;

    F[0][0] = x;
    F[0][1] = y;
    F[1][0] = z;
    F[1][1] = w;
}


int main()
{
    uint64_t n,k,t;
    scanf("%llu",&t);
    while(t--)
    {
        scanf("%llu",&n);
        scanf("%llu",&k);
        printf("%llu\n", (2*fib(n,k))%k);
    }
    return 0;
}

```

**OUTPUT:**

Problem Solver Badge

67 / 250



Solve 183 more problems to get Silver Badge

Status: ✓ Correct Answer

Submission ID: [84164229](#)

Time:

0.58s

Sub-Task	Task #	Result (time)
1	0	AC (0.325365)
Subtask Score: 10.00%		Result - AC
2	1	AC (0.561544)
Subtask Score: 30.00%		Result - AC
3	2	AC (0.579116)
Subtask Score: 60.00%		Result - AC
Total Score = 100.00%		

### QUESTION-3: Mixtures

#### CODE:

```

#include <stdio.h>
int main()
{
    int m[100][100],n,i,j,k,q,l;
    while(scanf("%d",&n)!=EOF)
    {
        for(i = 0;i < n;i++) scanf("%d",&m[i][i]);
        if(n==1)
        {
            printf ("%d\n",0);
            continue;
        }
        for(i = 0;i < n-1;i++)
    
```

**OUTPUT:**

100

## QUESTION-4: Binod and Chocolates


### CODE:

```
#include<iostream> using
namespace std;
int main()
{   int T;
cin>>T;
    while(T--)
    {       int A,B;
cin>>A>>B;
        if(A%3 == 0 || B%3 == 0 || (A+B)%3 == 0)
        {
            cout<<"YES"<<endl;
        }
    else
    {
        cout<<"NO"<<endl;
    } }
return 0;
}
```


### OUTPUT:

Problem Solver Badge

69 / 250



Solve 181 more problems to get Silver Badge

Status:  Correct Answer

Submission ID: [84167287](#)

Time:  
0.00s

Congratulations on solving the problem. Visit our practice section to solve more interesting problems

[View another problem](#) →

## QUESTION-5: SPECIAL FIBONACCI

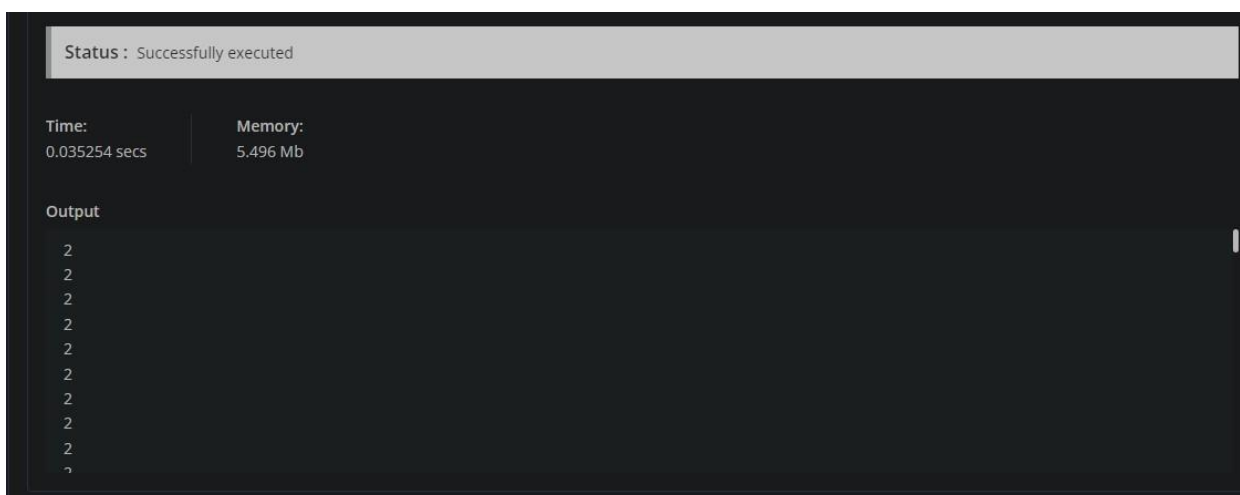
### CODE:

```

#include <iostream> using
namespace std; long CalXor(long
a,long b,long n){
    if(n==0){
        return a;
    }
    if(n==1){
return b;
    }
    if(n==2){
        return a^b;
    }
    return CalXor(a,b,n%3);
}
int main() {
    int t;
    cin>>t; while(t--
){
    long a,b,n;
    cin>>a>>b>>n;
    cout<<CalXor(a,b,n)<<endl;
}
    return 0;
}

```

## OUTPUT:



The screenshot shows the execution results of the provided C++ code. At the top, a status bar indicates "Status : Successfully executed". Below this, a table displays performance metrics: "Time: 0.035254 secs" and "Memory: 5.496 Mb". The main section, titled "Output", contains a vertical list of numbers: 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, and a final line with a tilde (~).

```

Status : Successfully executed

Time:      Memory:
0.035254 secs  5.496 Mb

Output
2
2
2
2
2
2
2
2
2
2
2
~

```