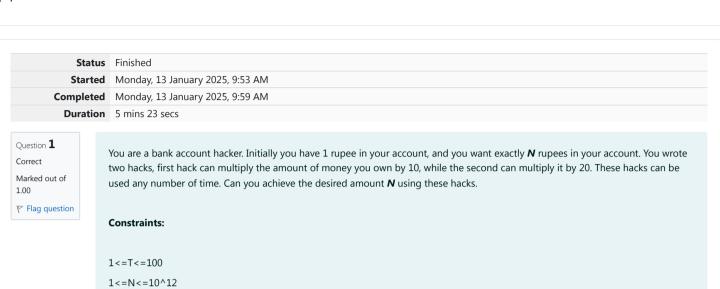
## GE23131-Programming Using C-2024





#### Input

· The test case contains a single integer N.

### Output

For each test case, print a single line containing the string "1" if you can make exactly N rupees or "0" otherwise.

SAMPLE INPUT

1

SAMPLE OUTPUT

1

SAMPLE INPUT

2

0

**Answer:** (penalty regime: 0 %)

```
Reset answer
```

```
* Complete the 'myFunc' function below.
3
     * The function is expected to return an INTEGER.
5
     * The function accepts INTEGER n as parameter.
     int myFunc(int n)
9
        while(n>1){
10
11
           if(n==200){
12
               n=1;
13
14
           else if(n%10==0){
15
               n/=10;
16
17
           else if(n%20==0){
18
               n/=20;
19
20
           else{
21
                return 0;
22
23
24
        return (n==0)?0:1;
25
26
```

	Test	Expected	Got	
~	<pre>printf("%d", myFunc(1))</pre>	1	1	~
~	printf("%d", myFunc(2))	0	0	~
~	printf("%d", myFunc(10))	1	1	~
~	printf("%d", myFunc(25))	0	0	~
~	printf("%d", myFunc(200))	1	1	~

Passed all tests! ✓

Question **2**Correct
Marked out of 1.00

Find the number of ways that a given integer,  $\mathbf{X}$ , can be expressed as the sum of the  $\mathbf{N}^{th}$  powers of unique, natural numbers.

For example, if X = 13 and N = 2, we have to find all combinations of unique squares adding up to 13. The only solution is  $2^2 + 3^2$ .

Complete the powerSum function in the editor below. It should return an integer that represents the number of possible combinations. powerSum has the following parameter(s): X: the integer to sum to N: the integer power to raise numbers to Input Format The first line contains an integer **X**. The second line contains an integer **N**. Constraints  $1 \le X \le 1000$  $2 \le N \le 10$ **Output Format** 

Output a single integer, the number of possible combinations calculated.

### Sample Input 0

10

#### Sample Output 0

1

#### Explanation 0

If X = 10 and N = 2, we need to find the number of ways that 10 can be represented as the sum of squares of unique numbers.

$$10 = 1^2 + 3^2$$

This is the only way in which **10** can be expressed as the sum of unique squares.

# Sample Input 1 100 2 Sample Output 1 3 **Explanation 1** $100 = (10^2) = (6^2 + 8^2) = (1^2 + 3^2 + 4^2 + 5^2 + 7^2)$ Sample Input 2 100 3 Sample Output 2 1 **Explanation 2** 100 can be expressed as the sum of the cubes of 1, 2, 3, 4. (1 + 8 + 27 + 64 = 100). There is no other way to express 100 as the sum of cubes. Answer: (penalty regime: 0 %) Reset answer \* Complete the 'powerSum' function below. \* The function is expected to return an INTEGER. \* The function accepts following parameters: \* 1. INTEGER x 7 \* 2. INTEGER n 8

10

11 <sub>v</sub> { 12 <sub>v</sub>

int powerSum(int x, int m, int n)

**if**(x==0){

```
16
             return 0;
 17
 18
         int count=0;
 19
         for(int i=m; ;i++){
 20
             int power=1;
             for(int j=0;j<n;j++){</pre>
 21 1
                power*=i;
 22
 23
 24 1
             if(power>x){
 25
                 break;
 26
 27
             count+=powerSum(x-power,i+1,n);
 28
 29
         return count;
 30 }
                                   Expected Got
     Test
 printf("%d", powerSum(10, 1, 2)) 1
                                             1
Passed all tests! ✓
```

Finish review