

GE23131-Programming Using C-2024

Quiz navigation



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| Status | Finished |
| Started | Sunday, 12 January 2025, 11:04 PM |
| Completed | Sunday, 12 January 2025, 11:15 PM |
| Duration | 11 mins 15 secs |

Question **1**

Correct

Marked out of 1.00

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You are a bank account hacker. Initially you have 1 rupee in your account, and you want exactly **N** rupees in your account. You wrote two hacks, first hack can multiply the amount of money you own by 10, while the second can multiply it by 20. These hacks can be used any number of time. Can you achieve the desired amount **N** using these hacks.

Constraints:

$1 \leq T \leq 100$
 $1 \leq N \leq 10^{12}$

Input

- The test case contains a single integer N.

Output

SAMPLE INPUT

1

SAMPLE OUTPUT

1

SAMPLE INPUT

2

SAMPLE OUTPUT

0

Answer: (penalty regime: 0 %)

Reset answer

```
1  /*
2  * Complete the 'myFunc' function below.
3  *
4  * The function is expected to return an INTEGER.
5  * The function accepts INTEGER n as parameter.
6  */
7
8  int myFunc(int n)
9  {
```

```
12         return 1;
13     }
14     if(n%10==0)
15     {
16         if(myFunc(n/10))
17         {
18             return 1;
19         }
20     }
21     if(n%20==0)
22     {
23         if(myFunc(n/20))
24         {
25             return 1;
26         }
27     }
28     return 0;
29 }
30
```

| | Test | Expected | Got | |
|---|---------------------------|----------|-----|---|
| ✓ | printf("%d", myFunc(1)) | 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! ✓

Marked out of
1.00

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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 $2^2 + 3^2$.

Function Description

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

$$1 \leq X \leq 1000$$

$$2 \leq N \leq 10$$

Output Format

Sample Input 0

10

2

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

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

```
1 | /*
2 |  * Complete the 'powerSum' function below.
3 |  *
```

```
7  * 2. INTEGER n
8  */
9  #include<stdio.h>
10 #include<math.h>
11
12 int powerSum(int x, int m, int n)
13 {
14     if(x == 0)
15         return 1;
16     if(x < 0 || pow(m,n) > x)
17         return 0;
18
19     return powerSum(x - pow(m,n),m + 1,n) + powerSum(x,m + 1, n);
20 }
```

| | Test | Expected | Got | |
|---|----------------------------------|----------|-----|---|
| ✓ | printf("%d", powerSum(10, 1, 2)) | 1 | 1 | ✓ |

Passed all tests! ✓

Finish review