

# GE23131-Programming Using C-2024

Quiz navigation



Show one page at a time

Finish review

Status	Finished
Started	Monday, 13 January 2025, 8:25 AM
Completed	Monday, 13 January 2025, 8:35 AM
Duration	10 mins 15 secs

Question **1**

Correct

Marked out of 1.00

☐ Flag question

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

**Constraints:**

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

**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, otherwise print "0".

**SAMPLE INPUT**

1

**SAMPLE OUTPUT**

1

**SAMPLE INPUT**

2

**SAMPLE OUTPUT**

0

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

	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!

Question 2

Correct

Marked out of 1.00

☐ Flag question

Find the number of ways that a given integer, ***X***, can be expressed as the sum of the ***N<sup>th</sup>*** powers of numbers.

For example, if ***X* = 13** and ***N* = 2**, we have to find all combinations of unique squares adding up to 13. The only combination is 2<sup>2</sup> + 3<sup>2</sup>.

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

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  $N$  unique squares.

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

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 %)

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

Passed all tests!

Save the state of the flags