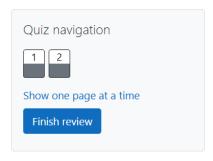
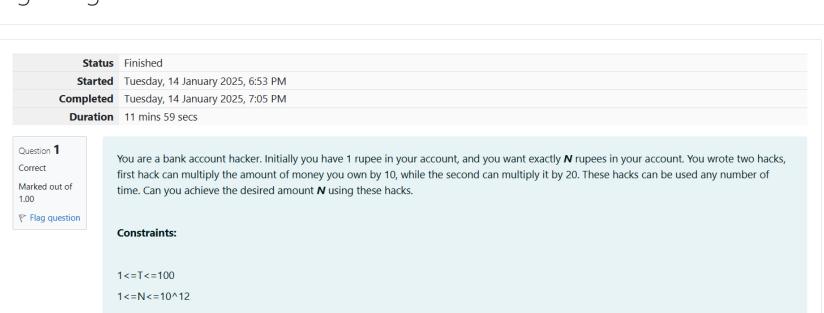
GE23131-Programming Using C-2024





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
SAMPLE OUTPUT
Answer: (penalty regime: 0 %)
 Reset answer
       * Complete the 'myFunc' function below.
   2
   3
       * The function is expected to return an INTEGER.
       * The function accepts INTEGER n as parameter.
   5
   6
   7
      int myFunc(int n){
   8 •
          while(n>1){
   9 ,
              if(n%20==0){
  10
  11
                  n=n/20;
  12 1
              } else if(n%10==0){
  13
                  n=n/10;
  14
              } else{
```

```
Expected Got
    Test
✓ printf("%d", myFunc(1))
   printf("%d", myFunc(2)) 0
                                   0
                                       ~

✓ printf("%d", myFunc(10)) 1
                                  1 🗸
                                   0
    printf("%d", myFunc(25)) 0
                                        ~
✓ printf("%d", myFunc(200)) 1
                                  1
```

return 0;

return 1;

2

0

15

16 17 18

19 20 21 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**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 $2^2 + 3^2$.

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

 $1 \le X \le 1000$

 $2 \le N \le 10$

Output Format

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

Sample Input 0

10

2

Sample Output 0 1 Explanation 0 $10 = 1^2 + 3^2$ Sample Input 1

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.

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

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

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.
 2
 3
     * The function is expected to return an INTEGER.
 4
     * The function accepts following parameters:
 6
     * 1. INTEGER X
     * 2. INTEGER N
 7
 8
     */
    #include<stdio.h>
    #include<math.h>
10
11
12
    int powerSum(int X, int current, int N)
13 ▼ {
14
        if(X==0){
15
           return 1;
16
       if(X<0||pow(current,N)>X){
17
18
           return 0;
19
20
        int include=powerSum(X-pow(current,N),current+1,N);
21
        int exclude=powerSum(X,current+1,N);
        return include+exclude;
22
23
24
25
26
```

| | Test | Expected | Got | |
|---|---|----------|-----|---|
| ~ | <pre>printf("%d", powerSum(10, 1, 2))</pre> | 1 | 1 | ~ |

Passed all tests! <