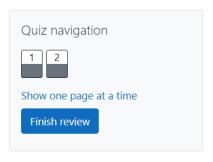
GE23131-Programming Using C-2024





Constraints:

1<=T<=100

1<=N<=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 or "0" otherwise.

SAMPLE INPUT

1

SAMPLE OUTPUT

1

SAMPLE INPUT

2

SAMPLE OUTPUT

0

Answer: (penalty regime: 0 %)

```
Reset answer
```

```
* Complete the 'myFunc' function below.
3
     * The function is expected to return an INTEGER.
 4
    * The function accepts INTEGER n as parameter.
 5
 6
 7
    int myFunc(long long N)
 9 ,
       if(N==1) {
10
11
       return 1;
12
13 v
       if (N<1) {
14
       return 0;
15
       if(N%10 ==0 && myFunc(N/10)) {
16
17
       return 1;
18
       if(N%20==0 && myFunc(N/20)) {
19
       return 1;
20
21
22
       return 0;
23
24
```

	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	~
1	nrintf("%d" myFunc(200))	1	1	1

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

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

Explanation 2

1

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.
 3
     * The function is expected to return an INTEGER.
 4
 5
     * The function accepts following parameters:
     * 1. INTEGER x
 6
 7
     * 2. INTEGER n
     */
 8
9
    #include <stdio.h>
   #include <math.h>
10
11
12
    int powerSum(int x, int current, int N)
13 🔻
14
        if(x==0) {
           return 1;
15
16
        if(x<0 || pow(current,N)> x) {
17
           return 0;
18
19
20
        int include = powerSum(x - pow(current,N),current + 1,N);
21
22
23
        int exclude = powerSum(x, current + 1,N);
24
        return include + exclude;
25
26 }
```

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

Passed all tests! <