Problem Result

Code : Minimum Count

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Given an integer N, find and return the count of minimum numbers required to represent N as a sum of squares.

That is, if N is 4, then we can represent it as : {1^2 + 1^2 + 1^2 + 1^2} and {2^2}. The output will be 1, as 1 is the minimum count of numbers required to represent N as sum of squares.

Input format :

The first and the only line of input contains an integer value, 'N'.

Output format :

Print the minimum count of numbers required.

Constraints :

0 <= n <= 10 ^ 4

Time Limit: 1 sec

Sample Input 1 :

12

Sample Output 1 :

3

Explanation of Sample Output 1 :

12 can be represented as :
A) (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1)

B) (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (1^1) + (2 ^ 2)

C) (1^1) + (1^1) + (1^1) + (1^1) + (2 ^ 2) + (2 ^ 2)

D) (2 ^ 2) + (2 ^ 2) + (2 ^ 2)

As we can see, the output should be 3.

Sample Input 2 :

9

Sample Output 2 :

1

```cpp
#include<bits/stdc++.h>
int minCount(int n){

    /*  Don't write main().
     *  Don't read input, it is passed as function argument.
     *  Return output and don't print it.
     *  Taking input and printing output is handled automatically.
     */
     int *arr = new int[n+1];
    arr[1]=1;

    for(int i=2;i<=n;i++){
        int j=1;
        int min=INT_MAX;
        while(j<=sqrt(i)){
            int a = arr[i-(j*j)];
            if(a<min){
                min=a;
            }
            j++;
        }
        arr[i]=min+1;
    }
    return arr[n];

}
```