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CODEFORCES
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PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   HACKS   ROOM   STANDINGS   CUSTOM INVOCATION

B. Yet Another Coin Problem

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

You have 5 different types of coins, each with a value equal to one of the first 5 triangular numbers: 1, 3, 6, 10, and 15. These coin types are available in abundance. Your goal is to find the minimum number of these coins required such that their total value sums up to exactly n.

We can show that the answer always exists.

Input

The first line contains one integer t ($1 \le t \le 10^4$) — the number of test cases. The description of the test cases follows.

The first line of each test case contains an integer n ($1 \le n \le 10^9$) — the target value.

Output

For each test case, output a single number — the minimum number of coins required.

Example

input	Copy
14	
1	
2	
3	
5	
7	
11	
12	
14	
16	
17	
18	
20	
98	
402931328	

output	Copy
1	
2	
1	
3	
2	
2	
2	
3	
2	
3	
2	
2	
8	
26862090	

Note

In the first test case, for $n = 1$, the answer is 1 since only one 1 value coin is sufficient. $1 = 1 \cdot 1$.

In the fourth test case, for $n = 5$, the answer is 3, which can be achieved using two 1 value coins and one 3 value coin. $5 = 2 \cdot 1 + 1 \cdot 3$.

In the seventh test case, for $n = 12$, the answer is 2, which can be achieved using two 6 value coins.

Codeforces Round 931 (Div. 2)

Finished

Practice

⭐

→ **Virtual participation**   〉

→ **Clone Contest to Mashup**   ⌄

You can clone this contest to a mashup.

Clone Contest

→ **Submit?**

Language: Python 3.8.10 ▼
Almost always, if you send a solution on PyPy, it works much faster

Choose file: Choose File   No file chosen

Submit

→ **Last submissions**

Submission	Time	Verdict
265862372	Jun/15/2024 12:35	**Accepted**
265862038	Jun/15/2024 12:33	Runtime error on test 2
265861639	Jun/15/2024 12:29	Runtime error on test 2
265860922	Jun/15/2024 12:24	Runtime error on test 2
265849916	Jun/15/2024 10:58	Time limit exceeded on test 2

→ **Problem tags**

brute force   dp   greedy   math   *1200

No tag edit access

→ **Contest materials**

- Announcement (en)   ✕
- Tutorial (en)   ✕

In the ninth test case, for $n = 16$, the answer is 2, which can be achieved using one 1 value coin and one 15 value coin or using one 10 value coin and one 6 value coin. $16 = 1 \cdot 1 + 1 \cdot 15 = 1 \cdot 6 + 1 \cdot 10$.