People in Cubeland use cubic coins. Not only the unit of currency is called a *cube* but also the coins are shaped like cubes and their values are cubes. Coins with values of all cubic numbers up to $9261 (= 21^3)$, i.e., coins with the denominations of 1, 8, 27, ..., up to 9261 *cubes*, are available in Cubeland.

Your task is to count the number of ways to pay a given amount using cubic coins of Cubeland. For example, there are 3 ways to pay 21 *cubes*: twenty one 1 *cube* coins, or one 8 *cube* coin and thirteen 1 *cube* coins, or two 8 *cube* coin and five 1 *cube* coins.

Input

Input consists of lines each containing an integer amount to be paid. You may assume that all the amounts are positive and less than 10000.

Output

For each of the given amounts to be paid output one line containing a single integer representing the number of ways to pay the given amount using the coins available in Cubeland.

Sample Input

```
10
21
77
9999
```

Sample Output

```
2
3
22
440022018293
```