Project Euler #12: Highly divisible triangular number

This problem is a programming version of Problem 12 from projecteuler.net

The sequence of triangle numbers is generated by adding the natural numbers. So the 7'th triangle number would be $1 + 2 + 3 + 4 + 5 + 6 + 7 = 28$. The first ten terms would be:

$1, 3, 6, 10, 15, 21, 28, 36, 45, 55, ...$

Let us list the factors of the first seven triangle numbers:

$1: 1$
$3: 1,3$
$6: 1,2,3,6$
$10: 1,2,5,10$
$15: 1,3,5,15$
$21: 1,3,7,21$
$28: 1,2,4,7,14,28$

We can see that 28 is the first triangle number to have over five divisors.

What is the value of the first triangle number to have over N divisors?

Input
First line T, the number of testcases. Each testcase consists of N in one line.

Output
For each testcase, print the required answer in one line.

Constraints
$1 \leq T \leq 10$
$1 \leq N \leq 10^3$

Sample input

```
4
1
2
3
4
```

Sample output

```
3
6
6
28
```