## Project Euler \#9: <br> Special Pythagorean <br> triplet

This problem is a programming version of Problem 9 from projecteuler.net
A Pythagorean triplet is a set of three natural numbers, $a<b<c$, for which,

$$
a^{2}+b^{2}=c^{2}
$$

For example, $3^{2}+4^{2}=9+16=25=5^{2}$
Given $N$, Check if there exists any Pythagorean triplet for which $a+b+c=N$
Find maximum possible value of $a b c$ among all such Pythagorean triplets, If there is no such Pythagorean triplet print -1 .

## Input Format

The first line contains an integer $T$ i.e. number of test cases.
The next $T$ lines will contain an integer $N$.

## Constraints

- $1 \leqslant T \leqslant 3000$
- $1 \leqslant N \leqslant 3000$


## Output Format

Print the value corresponding to each test case in separate lines.
Sample Input 0

```
2
12
4
```


## Sample Output 0

60
-1

## Explanation 0

- For $N=12$, we have a triplet $\{3,4,5\}$, whose product is 60 .
- For $N=4$, we don't have any pythagorean triple.

