

# A conjecture of Paul Erdős

In number theory there is a very deep unsolved conjecture of the Hungarian Paul Erdős (1913-1996), that there exist infinitely many primes of the form  $x^2+1$ , where  $x$  is an integer. However, a weaker form of this conjecture has been proved: there are infinitely many primes of the form  $x^2+y^4$ . You don't need to prove this, it is only your task to find the number of (positive) primes not larger than  $n$  which are of the form  $x^2+y^4$  (where  $x$  and  $y$  are integers).

## Input

An integer  $T$ , denoting the number of testcases ( $T \leq 10000$ ). Each of the  $T$  following lines contains a positive integer  $n$ , where  $n < 100000000$ .

## Output

Output the answer for each  $n$ .

## Example

### Input:

```
4
1
2
10
9999999
```

### Output:

```
0
1
2
13175
```