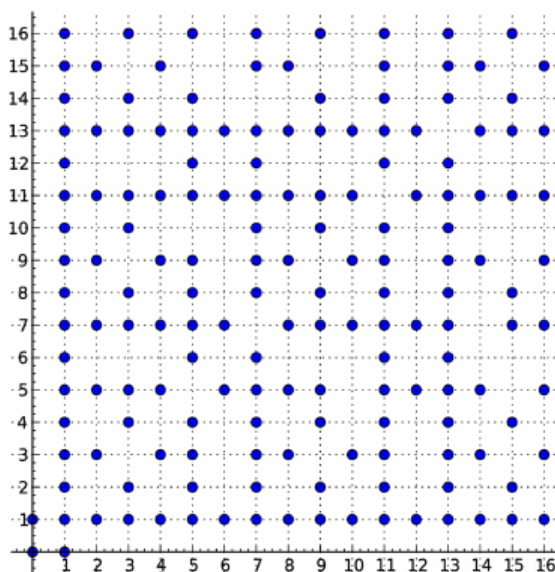# 7794 Great Thief

Once upon a time, there was a great thief who used the code name FWX. He lived in a two-dimensional world named Flat Land. In this land, houses are built only on the grid locations having integer coordinates, e.g., for a square Flat Land with a highest coordinate of n, there can be houses only at $(0,0), (0,1), \ldots, (0,n), (1,0), (1,1), \ldots, (1,n), (2,0), (2,1), \ldots, (2,n), \ldots, (n,0), (n,1), \ldots, (n,n)$. There are only non-negative coordinates in Flat Land.

FWX liked the time between 4 AM to 5 AM for his work when all the inhabitants were sound asleep. In some houses, he slipped and fell with all the things he took in his bag, making a loud sound and knocking himself out. All the inhabitants of the house were awakened and they called the police.

FWX was a great thief, so no jail could keep him for a long time. He broke out of jail and thought about why he was caught only in some particular houses. Then he discovered that there is a guard in the house at $(0, 0)$ who can shoot slippery material in a straight line from $(0, 0)$ which hits only the first house on that line and makes that house slippery. When the guard fires, say, along the line $x = y$, it makes the house at $(1, 1)$ slippery, but houses at $(2, 2), (3, 3)$, etc. are not affected. Similarly, along the line $2y = 5x$, $(2, 5)$ becomes slippery but not $(4, 10)$. The guard has an unlimited supply of slippery material and fires in any direction he wishes as often as he likes. See Figure below.

Example Square Flat Land with $n = 16$.

Your team is to write a program that will find the number of houses which are not safe for the great thief FWX, assuming that the guard has shot slippery material on every possible line. Remember, $(0, 0)$ is not safe because of the guard.

Input

Input to your program will be a series of test cases, one per line, terminated by end of file. There will be at most 1000 test cases. A test case is a single integer n, $1 \le n \le 1,000,000$ which specifies that the Flat Land for this case is a square with the highest coordinate of n.

Output

For each case, print a line containing the number of unsafe houses in that Flat Land on a separate line with no extra spaces or leading zeroes.

Sample Input

```
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
1000000
```

Sample Output

```
4
6
10
14
22
26
38
46
58
66
86
94
118
130
146
162
607927104786
```