## How Many Games?

A player has played unknown number of games. We know the average score of the player (sum of scores in all the games / number of games). Find the minimum number of games the player should have played to achieve that average.

The player can score any non-negative integer score in a game.

## Input

The first line consists of an integer $t$, the number of test cases. Each test case consists of a single rational number which represents the average score of the player.

## Output

For each test case, find the minimum number of matches the player should have played to achieve that average.

## Constraints

$1<=\mathrm{t}$ <= 1000
$1<=$ average <= 1000000 (maximum 4 digits after the decimal place)

## Example

Input:
3
5
5.5
30.25

Output:
1
2
4

