Problem 1: Decks Against Programmability
3+2 Points

Problem ID: `decks`
Rank: 1+2

Introduction

You've built your digital house of cards, but your friends aren't impressed! Instead, they insist a real life house of cards would be much cooler! Being a lazy programmer lacking patience and agility, you decide to hire a robot to build the house for you. Before the robot can get started however, you'll need to buy some cards, which come in decks of 54.

Problem

Find the smallest number of decks required in order to build a house of cards with $\mathbf{N}$ layers.

In a house of cards, each layer has pairs of diagonal cards leaning on each other. The top layer has 1 pair, the next layer has 2 pairs, and so on such that the bottom layer has $\mathbf{N}$ pairs. Each pair is supported by a horizontal card beneath it, except for pairs in the bottom layer. A house of cards with 4 layers is shown below.

Input Format

The first line of the input contains a positive integer $\mathbf{T}$ denoting the number of test cases that follow. Each test case consists of a single line containing a positive integer $\mathbf{N}$ denoting the number of layers in the house of cards you're trying to build.

Output Format

For each test case, output a single line containing an integer denoting the smallest number of decks needed to build the house of cards.

Constraints

This problem has a bonus set! Test sets are independent of each other, so you don't need to solve the bonus set in order to get points for the main set. Furthermore, if you have a working solution for the bonus, you can submit it to get full points on the main test set!

$1 \le \mathbf{T} \le 100$
$\mathbf{N}$ is even.

Main Test Set

$1 \le \mathbf{N} \le 10^3$

Bonus Test Set

$1 \le \mathbf{N} \le 10^9$

Sample Test Case

Sample Input:

```
5
1
6
10
108
1337
```

Sample Output:

```
1
2
3
325
49668
```

Sample Explanations:

For Test Case #1:
A house of 1 layer has 2 cards, so we need at least 1 deck (54 cards).

For Test Case #2:
A house of 6 layers has 57 cards, so we need at least 2 decks (108 cards).

For Test Case #3:
A house of 10 layers has 155 cards, so we need at least 3 decks (162 cards).

For Test Case #4:
A house of 108 layers has 17550 cards, so we need at least 325 decks (17550 cards).