**1490 - Doing the Best**

## Description

It's a statistical task, you are playing a simple game consisting in 1 <= N <= 10000 coins with two faces, a sun face and a moon face. Only one rule, you wins only if you obtain in a single configuration of launch, strictly more sun than moon faces. Then, given the value of N you can calculate the number of possible launch configurations (for two coins the configurations Sun+Moon and Moon+Sun are considered the same) and you must find the probability (real value between 0 and 1 rounded up to the sixth decimal place) of winning the game.

## Input specification

The first line of the input is T, the number of games in the input. In each of the T following lines, there is a integer number N corresponding to the T-th game played.

## Output specification

For each game, output the probability of winning the game. One game per line.

## Sample input

```
3
1
2
3
```

## Sample output

```
0.500000
0.333333
0.500000
```

## Hint(s)