

Fair Dice

Description

You, the talent gambler, are given a fair n sided dice. The numbers $1, 2, \dots, n$ are written on that n sides. If you roll it once and get x points, you can choose to either get paid x dollars, or pay 1 dollar to roll it again. You can “roll it again” as many time as you want, as you have infinite 1 dollors! Since you are the talent gambler, you want to maximize your expected payoff.

Input

The first line contains a integer T indicating the total number of test cases. Each test case contains one line with an integer n , denoting the number of side of dice.

- $1 \leq T \leq 10^5$
- $1 \leq n \leq 10^9$

The magic fair dice with 1 or even 10^9 sides are made by other talents, don't suspect them.

Output

For each test case, output your maximum expected payoff in irreducible fraction.

Sample Input

```
2
6
20
```

Sample Output

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4/1
91/6
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