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Mr. Bean Helping Out! Finally! (Points: 200)

Mr. Bean visits IIT Kharagpur and wants to help us formulate a problem for Bitwise - 2011. He comes across this problem of finding the value of the following expression:

$$f(n) = \frac{1}{\binom{n}{0}} + \frac{1}{\binom{n}{1}} + \cdots + \frac{1}{\binom{n}{n}}$$

However, Mr. Bean is required to give a better than naive algorithm for us to be able to give it as a problem in Bitwise. He soon gets disappointed since he is not able to come up with a better algorithm to compute $f(n)$, but he realizes that he might be able to do something better if he wants to compute $f(n)$ for a large number of n's.

Are you as intelligent as Mr. Bean?

Input Format:

First line contains the number of test cases **T**. For each test case, there will be a single line of input having an integer n.

Limits: $1 \leq \mathbf{T} \leq 450$, $1 \leq \mathbf{n} \leq 460$.

Output Format:

For each test case, output the value of ***f(n)*** in a separate line. The value of ***f(n)*** should be printed in an irreducible fractional form ***p/q*** if it is not an integer. Otherwise just the integer has to be printed.

Sample Input:

```
4
7
1
3
4
```

Sample Output:

```
256/105
2
8/3
8/3
```

Instructions

- Your program should not print anything other than what is specified in the output format. A program with extraneous output (even a single space) will be treated as incorrect!

- While submitting your code, please select the language carefully *gcc/g++*. Using the wrong language will lead to compiler error.
- The only input/output functions allowed are `printf, scanf, cin, cout`. Perform all read/write operations through stdin/stdout. The solutions will be checked using command line redirection only.

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