

Problem H. Generator

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 256 mebibytes

Consider next algorithm, which generates random prime number between 2 and N :

1. Choose some random integer x from the range $[2, N]$. For all $N - 1$ integers the probability to be selected is the same.
2. Check if x is prime. If yes, go to step 3, else go to step 1.
3. Return x as the result.

To check if x is prime, the following algorithm is used:

1. Let $d := 2$.
2. If d is greater than square root from x , i.e. $d^2 > x$, then terminate the process and tell that x is prime. Else go to step 3.
3. Check, if x is divisible by d . If yes, then terminate the process and tell that x is not a prime. Else let $d := d + 1$ and go to step 2.

For a given N , find out expected numbers of divisions at step 3 in second algorithm.

Input

First line contains one integer T ($1 \leq T \leq 10^5$) — number of testcases.

Each testcase is placed on the separate line and consists of one integer N ($2 \leq N \leq 10^7$).

Output

For each test case, print the answer in the form of irreducible fraction.

Example

standard input	standard output
6	0/1
2	0/1
3	1/2
4	2/3
5	1/1
6	2/1
10	