
Paradoxical tests

P89942_en

Desè Concurs de Programació de la UPC - Semifinal (2012-06-30)

Consider the following test:

What is the probability that if you choose at random one answer of this test, your answer will turn out to be correct?

- a) $2/5$
- b) $3/5$
- c) $3/5$
- d) $2/5$
- e) $3/5$

As you can see, all answers above may be considered correct, but none of them is 1!

Given the number of answers n of a test, how many such paradoxical tests exist? Note that the order of the answers is relevant. For instance, a test with d) $3/5$ and e) $2/5$ would be considered different to the one above.

Input

Input consists of several cases, each one with a number n between 1 and 1000.

Output

For every n , print the number of paradoxical tests with n answers modulo 1006133.

Sample input

```
1
3
5
203
1000
```

Sample output

```
0
3
15
1006132
707988
```

Problem information

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