

# The real logarithm

Compute 101 significant figures of the logarithm of a positive real number.

## Input

The first line of the input contains the number of test cases. In each of the following lines, a single real number  $1 \leq x \leq 100$  is given, in the usual decimal notation. The number of decimal digits of  $x$  is not more than 101.

## Output

Each line of the output should be the sequence consisting of the first 101 significant decimal digits of the logarithm of  $x$ . All trailing and leading zeroes, as well as the decimal point (if any) should be removed.

## Example

### Input:

```
2
1
3.1415926535897932384626433832
```

### Output:

```
0
1144729885849400174143427351327752157627210731401746036785205942589070827177558730931032351538638113
```