

# Number Trick

adapted from a problem by Ulf Lundström

Antonio is at it again, pretending to know something about math. He came up with a special number trick to simplify multiplication. He claims that, for example, to multiply a number by 2.6, all you have to do is move the first digit to the end of the number. Super simple: Boom!—he gestures. Kai expresses a bit of skepticism about the validity of Antonio's trick, so then Antonio retorts with one of his famous proofs by example:  $135 \times 2.6 = 351$ , and  $270270 \times 2.6 = 702702$ . See, it's correct! Some students also start to raise questions, so Antonio gives them a challenge. They give him a multiplier  $X$ , and he'll respond with an example that shows that his technique works. Some students try to point out the fundamental fallacy of Antonio's proof method, but then the students decide to play that game anyway.

Now Antonio really needs your help. Can you write a program that, given a multiplier  $X$  gives a list of integers for which multiplying by  $X$  is equivalent to moving the first digit to the end of the number?

## Input

The input is a single decimal number  $X$  ( $1 \leq X \leq 1000$ ) with at most 4 digits after the decimal point.

## Output

Output a list of all positive integers less than  $10^8$  for which Antonio's trick works. Write the numbers in ascending order, one number per line. If the list is empty, output instead "No solution".

## Examples

### Sample input 1

```
2.6
```

### Sample output 1

```
135
270
135135
270270
```

### Sample input 2

```
3.1416
```

### Sample output 2

```
No solution
```

## Limits

Time limit is 1 second.

Memory limit is 1024 megabytes.