10. Ones Galore

Program Name: Ones.java   Input File: ones.dat

Any positive integer that is not divisible by 2 or 5 has a multiple that is all ones. For example, for the integer three, 111 is a multiple that contains all ones. You are to write a program that will find the smallest integer containing all ones that is a multiple of a given integer.

Input
The only line of input will contain a list of positive integers less than 20, each separated by a space.

Output
For each integer input, you will print on a separate line the number of ones in the smallest multiple of the integer that contains only ones. If the input is not valid, print INVALID INPUT.

Example Input File
```
7 5 9 17
```

Example Output to Screen
```
6
INVALID INPUT
9
16
```