Problem G
Digit Product

Consider a positive integer x. Multiply its nonzero digits and you get another integer y. Repeating this process, you eventually arrive at a single digit between 1 and 9. Write a program that reads x and outputs the resulting digit.

Input

An integer x with $10 \leq x \leq 1\,000$.

Output

Print a digit between 1 and 9, the result of repeatedly multiplying the nonzero digits of x as described above.

Explanation of Sample Inputs

In Sample Input 1, we have $x = 808$. Multiplying 8 and 8, we arrive at 64. Then we get $6 \cdot 4 = 24$, and finally $2 \cdot 4 = 8$, which is the sample output.

In Sample Input 2, there is only a single nonzero digit, 2. The product of all digits in a set containing only a single element is the digit itself. Thus the answer is 2.

Sample Input 1	Sample Output 1
808	8

Sample Input 2

```
20
```

Sample Output 2

```
2
```