



# Project Euler #4: Largest palindrome product

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Problem

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This problem is a programming version of [Problem 4](#) from [projecteuler.net](#)

A palindromic number reads the same both ways. The smallest 6 digit palindrome made from the product of two 3-digit numbers is  $101101 = 143 \times 707$ .

Find the largest palindrome made from the product of two 3-digit numbers which is less than  $N$ .

## Input Format

First line contains  $T$  that denotes the number of test cases. This is followed by  $T$  lines, each containing an integer,  $N$ .

## Constraints

- $1 \leq T \leq 100$
- $101101 < N < 1000000$

## Output Format

Print the required answer for each test case in a new line.

## Sample Input 0

```
2
101110
800000
```

## Sample Output 0

```
101101
793397
```

## Explanation 0

- $101101$  is product of  $143$  and  $707$ .
- $793397$  is product of  $869$  and  $913$ .

[f](#) [t](#) [in](#)Submissions: [13755](#)

Max Score: 100

Difficulty: Medium

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