

Project Euler #40: Champernowne's constant

Problem Statement

This problem is a programming version of [Problem 40](#) from [projecteuler.net](#)

An irrational decimal fraction is created by concatenating the positive integers:

$$0.12345678910\ 1\ 112131415161718192021\cdots$$

It can be seen that the 12^{th} digit of the fractional part is 1.

If d_n represents the n^{th} digit of the fractional part, find the value of the following expression.

$$d_{i_1} \times d_{i_2} \times d_{i_3} \times d_{i_4} \times d_{i_5} \times d_{i_6} \times d_{i_7}$$

Input Format

First line contains T that denotes the number of test cases. This is followed by T lines, each containing an 7 integers.

$$i_1\ i_2\ i_3\ i_4\ i_5\ i_6\ i_7$$

Output Format

Print the answer corresponding to the test case.

Constraints

$$1 \leq T \leq 10^5$$

$$1 \leq i_1, i_2, i_3, i_4, i_5, i_6, i_7 \leq 10^{18}$$

Sample Input

```
1
1 2 3 4 5 6 7
```

Sample Output

```
5040
```