## Assignments

## Problem

Your task will be to calculate number of different assignments of n different topics to n students such that everybody gets exactly one topic he likes.

## Input

First line of input contains number of test cases $c(1<=c<=80)$. Each test case begins with number of students $n(1<=n<=20)$. Each of the next $n$ lines contains $n$ integers describing preferences of one student. 1 at the ith position means that this student likes ith topic, 0 means that he definitely doesn't want to take it.

## Output

For each test case output number of different assignments (it will fit in a signed 64-bit integer).

## Example

## Input:

3
3
111
111
111
11
10010000011
11111010100
10010011010
10111011011
01110100111
11100100000
00001010001
10110000001
00101100011
11100010101
10001111000
11
01110100010
00111111111
11010000010
01010101011
10010000101
00101100001
10101110110
10110110010
00110111111
01000000011
01100000101
Output:
6
7588

