# 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 ( $1 \le c \le 80$ ). Each test case begins with number of students n ( $1 \le n \le 20$ ). 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