# Joyful 24 Game

## Description

There are 16 students in arithmetic class, each one pick one poker card with value $a_i$. You, the talent teacher, want to divide them into 4 groups, and each group has 4 members to play the *24 Game*.

The *24 Game* is an arithmetical game in which the object is to find a way to manipulate four integers, so that the end result is 24 using addition, subtraction, multiplication, or division. For example, a possible solution for $(5, 10, 10, 13)$ is $(13 \times 10 - 10) \div 5$, and in some cases there is no solution, like $(1, 1, 1, 1)$.

If any group has no solution, they will be very sad. As a kind teacher, you will be very very sad if any one being very sad. So you want to count how many partitions are good, which means no one will be sad.

## Input

The first line contains a integer $T$ indicating the total number of test cases. Each test case contains one line with 16 integers $a_1, a_2, \ldots, a_{16}$, denoting the card value of each student.

- $1 \leq T \leq 10000$
- $1 \leq a_i \leq 13$

## Output

For each test case, print the number of good partitions.

## Sample Input

```
4
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 8 1 1 1 8 1 1 1 8 1 1 1 8
1 1 1 1 1 1 8 8 9 9 9 10 10 10 12 12
10 3 4 5 4 3 9 5 11 11 4 4 10 12 5 11
```

## Sample Output

```
0
369600
40
766666
```