Once upon a time, three girls — Winnie, Grace and Bonnie — owned a large number of pearls. However, each of them only had a single color of pearls. Winnie had white pearls, Grace had grey pearls and Bonnie had black pearls. One day, after a long discussion, they decided to make necklaces using the pearls. They are interested in knowing how many patterns can be formed using a certain number of pearls of each color, and have asked you to solve this problem for them.

Note that rotating or flipping over a necklace cannot produce a different kind of necklace. i.e. The following figure shows three equivalent necklaces.
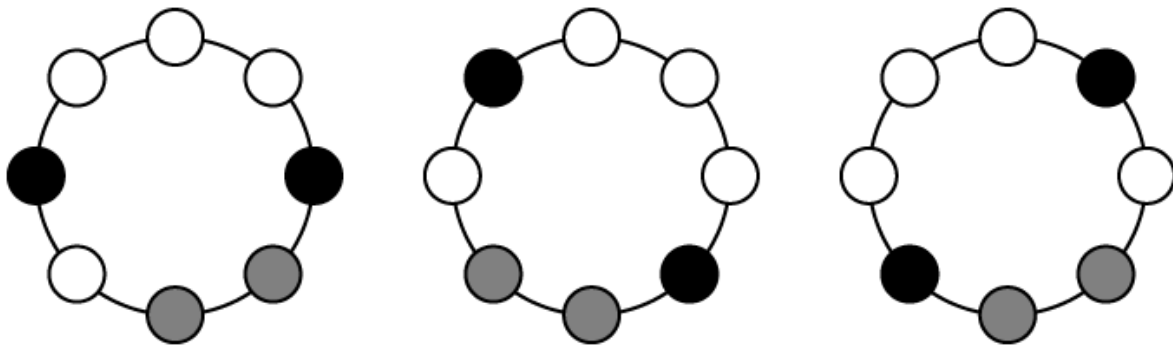
The following figure shows all possible necklaces formed by 3 white pearls, 2 grey pearls and 1 black pearl.
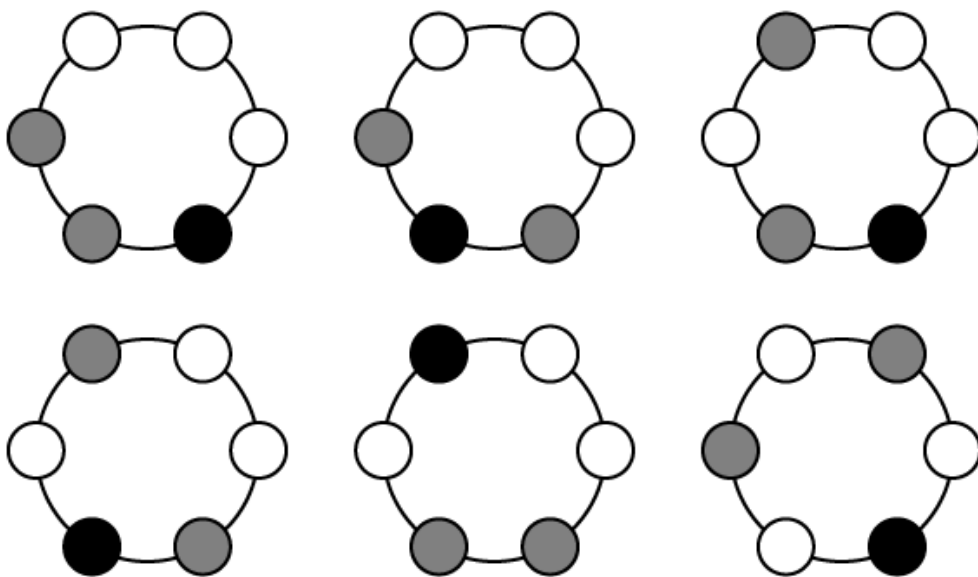
Input

The input begins with an integer N (≤ 2500) which indicates the number of test cases followed. Each of the following test cases consists of three non-negative integers a, b, c, where $3 \leq a + b + c \leq 40$.

Output

For each test case, print out the number of different necklaces that formed by a white pearls, b grey pearls and c black pearls in a single line.

Sample Input

```
2
3 2 1
2 2 2
```

Sample Output

```
6
11
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