

Colored Cubes

Time Limit: 1.0s **Memory Limit:** 256M

Can and Birkan have N colored squares. The i -th square has color C_i . They build a cube using six of the squares. Then they disassemble the cube, build another one and so on. Every time they are trying to build a cube different from the ones they have built before. Two cubes are considered to be same if one of them can be rotated in such way that it looks exactly like the other cube, i.e. the colors on each side are the same. Your task is to count the number of different cubes Can and Birkan can build using their squares.

Input

The first line contains integer N . The following line contains N integers C_i separated with single spaces.

Output

The number of different cubes.

Constraints

- $6 \leq N \leq 25$
- $1 \leq C_i \leq N$

Samples

Input(stdin)

```
6
1 1 1 1 2 2

7
1 2 3 4 5 6 7
```

Output(stdout)

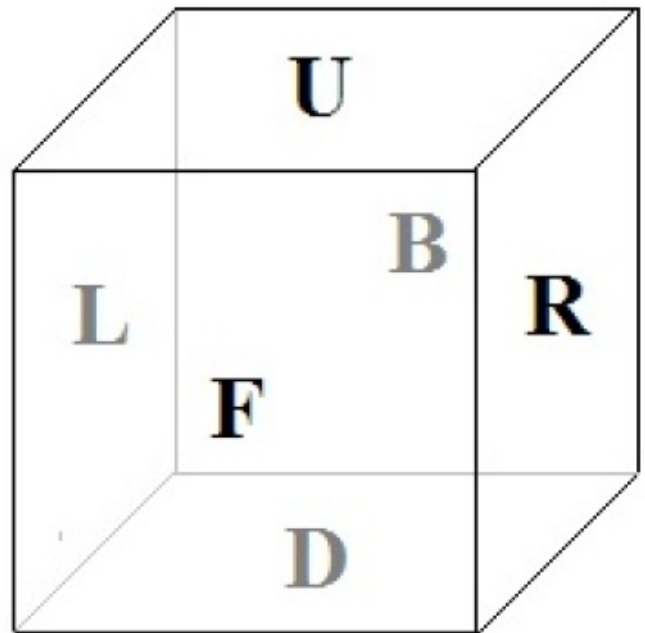
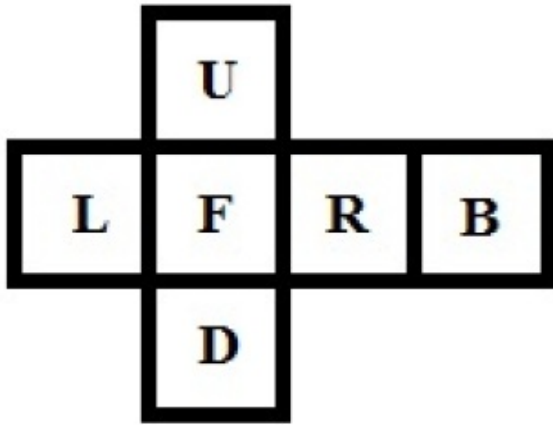
```
2

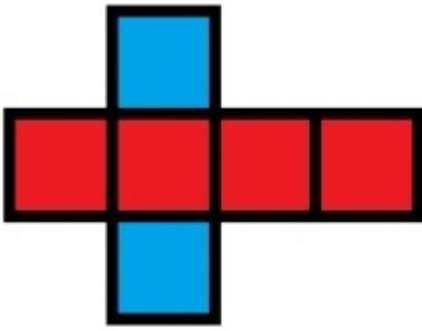
210
```

Notes See a cube structure below. On the figure below:

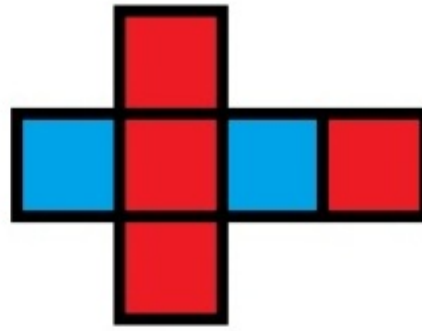
- cubes 1 and 2 are the same;
- cubes 3 and 4 are the same;

- cubes 5 and 6 are different;
- cubes 7 and 8 are different.

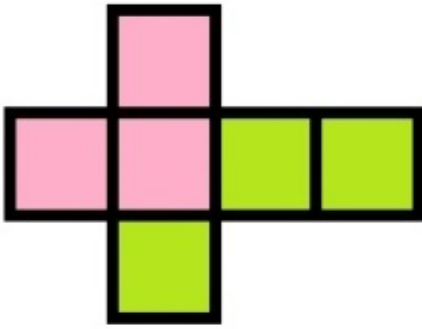




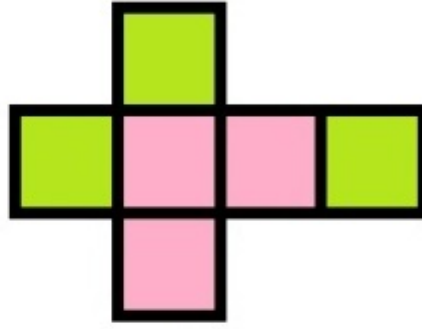
1



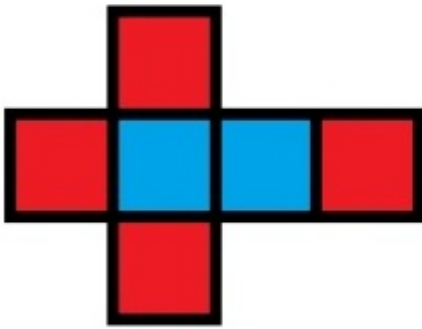
2



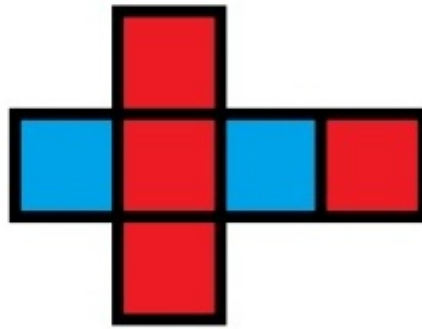
3



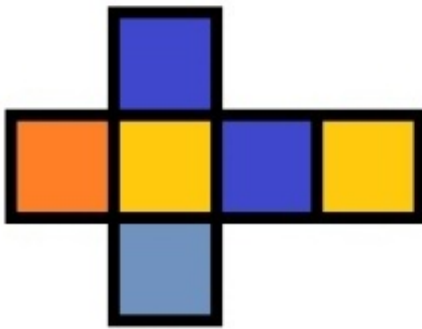
4



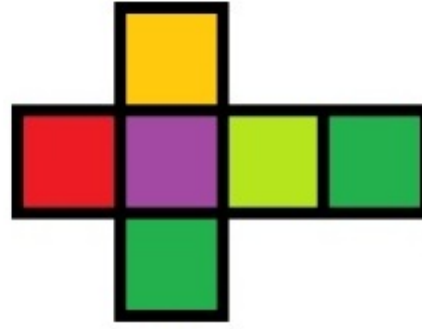
5



6



7



8