Problem W
White and Black

Time limit: 5 seconds
Memory limit: 256 megabytes

Problem Description

There are 9 white tokens and 9 black tokens on a 3-by-6 grid. Every grid has exact one token on it. A valid move is to exchange the two tokens on adjacent grids. Given two placements A and B of the tokens. How many moves are required to transform A to B?

Input Format

The first line of the input contains an integer t ($t \leq 100$) indicating the number of test cases. Each test case consists of 6 lines. The first three lines and the last three lines represent placement A and placement B, respectively. The token on the intersection of row i and column j is white if and only if the j-th character of the i-th line of the placement is `0`.

Output Format

For each test case, output the minimum number of moves.

Sample Input

```
2
000111
000111
000111
001011
000111
000111
010101
101010
010101
101010
010101
101010
```

Sample Output

```
1
9
```