# Problem 3 – Adding Hex Numbers

Unlike the decimal system (base 10) with its 10 digits, the **hexadecimal system** (base 16) with its 16 digits (0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F) allows for more compact representation of numbers. One of the many nice things that can be done with hexadecimal numbers is adding them.

e.g.

A + 5        = F
AA + 11     = BB
AA + FF     = 1A9

When adding the multi-digit hexadecimal numbers it seems that the number of carry-operations is closely linked to the complexity of performing the task. The first two adding examples seem easier than the last one since the last example required two carry-operations.

Your task is to measure the number of carry-operations required in adding two hexadecimal numbers.

## INPUT

The first line contains an integer N indicating the number of pairs of hexadecimal numbers that follow (1 <= N <= 200). Each additional line will contain two hexadecimal numbers. The hexadecimal numbers will be positive, of arbitrary length, be in upper case, and will have at most 256 digits.

## OUTPUT

Each line will consist of a number indicating the number of carry-operations for the corresponding addition question.

## SAMPLE INPUT

```
3
8 3
59 A7
4FE 20
```

## SAMPLE OUTPUT

```
Problem 3 by team X
0
2
1
End of problem 3 by team X
```