12705   Breaking Board

Hector Salamanca, the cartel don aged before his years and is always confined to his wheelchair and oxygen tank. He never speaks a syllable. To express himself he used a board. The board was a 6×6 2D grid as shown in the picture below. Top-left corner is $(1, 1)$.

A	B	C	D	1	2
E	F	G	H	3	4
I	J	K	L	M	N
O	P	Q	R	S	T
U	V	W	X	Y	Z
5	6	7	8	9	0

To complete a sentence he goes character by character. For choosing a single character two steps involve:

1. Select the desired row of the character.

2. Select the desired column of the character.

Cost of choosing a character is the sum of row and column of the character in the board. Total cost of making a sentence is the sum of cost of choosing all characters. **You can assume that cost of choosing space of a sentence is 0**. For Example, cost of making sentence "CALL DEA" is $(1+3)$ + $(1+1)$ + $(3+4)$ + $(3+4)$ + $(1+4)$ + $(2+1)$ + $(1+1)$ = 30.

In our problem Hector has a sentence to complete but the board is not fixed. We can break the board and reform it to minimize the cost of completing the sentence. We need to figure out what could be the minimal cost possible.

A	C	D	B	1	2
L	F	G	H	3	4
E	J	K	I	M	N
O	P	Q	R	S	T
U	V	W	X	Y	Z
5	6	7	8	9	0

This can be an optimal formation of board. Then the cost will be $(1+2)$ + $(1+1)$ + $(2+1)$ + $(2+1)$ + $(1+3)$ + $(3+1)$ + $(1+1)$ = 21.

Input

Input starts with an integer T (≤ 100), denoting the number of test cases. Each case starts with a string of length L (≤ 100) consisting of only uppercase letters (A-Z), digits (0-9) and spaces.

Output

For each case, print the minimum possible cost in a single line. See the samples for exact formatting.

Sample Input

```
3
CALL DEA
WALTER WHITE
09AZ
```

Sample Output

```
21
38
12
```