

Problem G: 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	Output for Sample Input
2 CALL DEA WALTER WHITE 09AZ	21 38 12

Problem Setter : Kaysar Abdullah

Alternate Solution : Prasanjit Barua