Problem 227: Space Scores

Difficulty: Easy

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Originally Published: Code Quest 2024

Problem Background

You're an astronaut in orbit around Earth. You've got a number of missions to accomplish, but they don't take up as much time as you'd expected. You've decided to make a game to play with your colleagues to pass the time between mission tasks. You'll need to use the computers on the station to create a virtual version of one of your favorite word games; after all, in zero gravity, board game pieces tend to float around, and you don't want to find yourself scrabbling for missing pieces!

Problem Description

This particular word game asks players to build words using a series of tiles which each contain a single letter. The words you make are then scored using the point values of each letter. Letters are assigned point values that are roughly inversely proportional to their frequency within the English language. Specifically, these point values are assigned as follows:

- 1 point: A, E, I, L, N, O, R, S, T, U
- 2 points: D, G
- 3 points: B, C, M, P
- 4 points: F, H, V, W, Y
- 5 points: K
- 8 points: J, X
- 10 points: Q, Z

In order to make your game, you'll need to write a program that can calculate the base value of a word given the letters it contains and their associated point values above.

Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include a single line that contains a word in uppercase letters.

```
3
JUPITER
MARS
GALAXY
```

Sample Output

For each test case, your program must print:

- One line for each letter in the word in the order in which those letters appear in the word. These lines should contain the respective letter, an equals sign, and the letter's point value.
- One line containing the word "TOTAL" in uppercase letters, an equals sign, and the total point value of the word.

```
J=8
U=1
P=3
I=1
T=1
E=1
R=1
TOTAL=16
M=3
A=1
R=1
S=1
TOTAL=6
G=2
A=1
L=1
A=1
X=8
Y=4
TOTAL=17
```