

Problem 201: Pennies Add Up

Difficulty: Easy

Author: Ryan Regensburger, Huntsville, Alabama, United States

Originally Published: Code Quest 2023

Problem Background

They say a picture is worth a thousand words, but what are words worth? Perhaps they're worth the sum of their letters, but then what is each letter worth?

You may have received a school assignment once to find words that were worth one dollar (100 cents), where each letter in the word was worth a certain number of cents. It's surprisingly difficult, so let's write a computer program to handle the problem for us.

Problem Description

Your program will be given a list of words and the value of the letter A in cents. Each successive letter in the alphabet will be worth one cent more, up to a maximum of 26 cents. The letter after the one worth \$0.26 will wrap back around to be worth a single cent. For example, if A is worth 5 cents, B will be worth 6 cents, C will be worth 7 cents, and so on; V will be worth 26 cents, and W will be worth 1 cent.

For each word in the given list, you'll need to total up the values of the letters in that word to determine their value. If the word is worth exactly \$1.00, it's a winner!

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 line containing two positive integer values, separated by spaces:
 - The value of the letter A, in cents. This value will be between 1 and 26, inclusive.
 - **W**, the number of words listed for this test case
- **W** lines, each containing a single word in uppercase letters

```
2
1 4
FIRST
SECOND
THIRD
PROBLEMS
7 3
WINNER
CHICKEN
DINNER
```

Sample Output

For each test case, your program must print one line for each word in the test case worth exactly \$1.00, containing the following:

- The word "WINNER"
- A space
- An integer showing the value of the letter A in cents
- A colon (:)
- A space
- The \$1.00 word in uppercase letters

Words should be printed in the order presented in the input.

```
WINNER 1: PROBLEMS
WINNER 7: DINNER
```