

UCF “Practice” Local Contest — Aug 27, 2016

Tip to be Palindrome

filename: tipit
(*Difficulty Level: Easy*)

One of the cool UCF CS alumni is Dr. Greg, The Palindrome Tipper. A palindrome is a string that reads the same forward and backward, e.g., madam, abba, 3, 44, 525.

One cool thing about Dr. Greg is that he leaves at least 20% tip when he eats out, e.g., if the meal is \$30, Dr. Greg leaves \$6 ($30 \cdot 0.20$) for tip. If the tip (20%) is not a whole dollar amount, he rounds up the tip to make it a whole number. For example, if the meal is \$12, a 20% tip would be \$2.40 ($12 \cdot 0.20$) but Dr. Greg would leave \$3 for tip.

Another cool thing about Dr. Greg is that he is a palindrome guru. If his total bill (meal plus tip) is not a palindrome, he will increase the total (by adding to the tip) to make the total a palindrome. He will, of course, add the minimum needed to make the total a palindrome.

The Problem:

Given Dr. Greg’s meal cost, your program should determine the tip amount for him (according to his rules) and the total bill.

The Input:

The first input line contains a positive integer, n , indicating the number of times Dr. Greg ate out. The meal costs are on the following n input lines, one per line. Each input will contain an integer between 5 and 10000 (inclusive).

The Output:

At the beginning of each test case, output “Input cost: c ” where c is the input cost. Then, on the next output line, print the tip amount and the total bill, separated by one space. Leave a blank line after the output for each test case.

Sample Input:

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2
12
84
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Sample Output:

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Input cost: 12
10 22

Input cost: 84
17 101
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