Tipping Palindromes

Danny is a "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 Danny is that he leaves at least 20% tip when he eats out, e.g., if the meal is $30, Danny leaves $6 (30*.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*0.20) but Danny would leave $3 for tip.

Another cool thing about Danny 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 Danny'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 Danny 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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