

Soda Slurper

Tim is an absolutely obsessive soda drinker, he simply cannot get enough. Most annoyingly though, he almost never has any money, so his only obvious legal way to obtain more soda is to take the money he gets when he recycles empty soda bottles to buy new ones. In addition to the empty bottles resulting from his own consumption he sometimes finds empty bottles in the street. One day he was extra thirsty, so he actually drank sodas until he could not afford a new one anymore.

Input

The first line of the input contains an integer t . t test cases follow. Each test case consists of a single line containing three integers e f c , where e is the number of empty soda bottles in Tim's possession at the start of the day, f is the number of empty soda bottles found during the day and c is the number of empty bottles required to buy a new soda.

Output

For each test case, print a line containing "Case # i : x " where i is its number, starting at 1, and x is the number of sodas Tim drank on his extra thirsty day. Each line of the output should end with a line break.

Constraints

- $1 \leq t \leq 20$
- $0 \leq e \leq 1000$
- $0 \leq f \leq 1000$
- $2 \leq c \leq 2000$

Sample Input 1

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2
9 0 3
5 5 2
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Sample Output 1

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Case #1: 4
Case #2: 9
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