

## Weird Bacteria

Jojo is a scientist who was researching strange bacteria, which reproduce by dividing. Since the birth of a bacterium, it needs *N* minute to do its first division. After that, the bacterium splits every *M* minute. As a good friend of Jojo, you are asked to help him count the number of bacteria after division for P minutes! You always start with a new birth bacterium!

For this problem please make a function:

"int getBacteria(int firstdivision, int afterfirstdivision, int time, int maxtime)".

Which gives results, the number of bacteria after division. You are encouraged to use recursive techniques to solve this problem.

DO NOT include any built-in C/C++ function, except for "stdio.h" function.

## **Format Input**

The first line contains *T*, the number of test cases.

For each test case, the input consists of 3 integers: N, the time for the first division, M, the time for the next divisions, and P, the time target for the division of the bacteria.

## **Format Output**

Output "Case #X: Y" for each question, where X is the question number, and Y is the result of the sum.

## **Constraints**

 $1 \le T \le 10$ 

 $1 \le M \le 50$ 

 $1 \le N \le 50$ 

 $1 \le P \le 23$ 

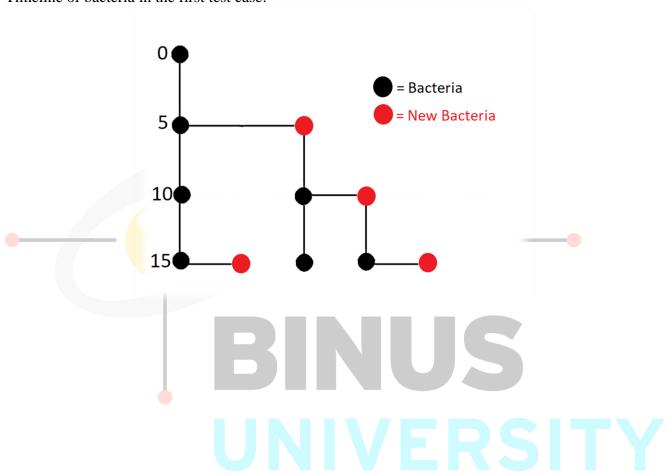


Sample Input	Sample Output
3	Case #1: 5
5 10 15	Case #2: 1
5 10 1	Case #3: 2
1 1 1	

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Timeline of bacteria in the first test case:



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