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

$1 \leq T \leq 10$
$1 \leq M \leq 50$
$1 \leq N \leq 50$
$1 \leq P \leq 23$

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

Timeline of bacteria in the first test case: