Assignment Case	
COMP6047 Algorithm and Programming	
Computer Science	**<Case Code>**
Valid on *Compact Semester Year 2018/2019*	**Revision 00**

Soal
Case

Hop and Count

Jojo, who learnt about repetition and selection, would like to test his recently learnt skill. He was observing his pet bunny hops around, and got a strikeful idea. He was counting the number of hops and was trying to put those into some groups, but unfortunately, math isn't his forte. You, as the programmer, are asked to help Jolly found the answer for the problem

Format Input

The first line consist of a single integer N. N indicating the number of test cases
For each test case, there will be four integers, P1, P2, S, G. P1 and P2 indicates the initial and last position of the bunny. S indicates the range of its step, and G is the number of hops needed to make a group.

Format Output

For each test case, output the answer with format "Case #T: P", where T is the number of test cases and P is the number of groups that has been made

Constraints

$1 \leq N \leq 100$

$2 \leq G \leq 100$

$1 \leq S \leq 50$

$1 \leq P1, P2 \leq 2^{31s}$

$P1 \leq P2$

Sample Input	**Sample Output**
3 1 3 1 2 5 10 2 9 1 10 1 2	Case #1 : 1 Case #2 : 0 Case #3 : 5

Explanation
Test Case # 1:
1 3 1 2
1 2 3
Since there exist 1 group formed, so the answer is 1
Test Case # 2:
5 7 9
Since there are less hops count needed to form a group, the answer is 0