

B. Packing Bricks

Input: standard input

Output: standard output

Boss Nass wants to build a new palace and has assigned Jar Jar Binks the task of packing bricks into boxes for shipping. Well, packing bricks is a mind-numbing task for some Jar Jar's advanced intellect, so he finds himself pondering great philosophical questions: Is there a Force, is a dictatorship a more efficient form of government than a republic, and what is the maximum number of bricks I can put into a single box?

The first two questions are, of course, highly subjective, but you can help Jar Jar with the last. Given the dimensions of the box, and the dimensions of the bricks, you are to compute the maximum number of bricks Jar Jar can put in the box. Here are some restrictions: the box and all bricks are rectangular solids; all the bricks are identical; Jar Jar isn't so clever about weird geometric packings, so all bricks be laid in with their edges parallel to the edges of the box (no diagonal placings or anything) and all bricks will be oriented identically in the box (no criss-crossings).

Input

The input consists of several test lines. Each line (but the last) will contain 6 positive decimal integers no larger than 10000. The first three represent the dimensions of the box. The last three represent the dimensions of the bricks. There will be one or more spaces separating adjacent integers on the line, and the line will be terminated by exactly one <EOL>. The last line will contain three zeros, separated by one or more spaces, followed by <EOL>. This line is not to be processed; it merely signifies the end of the input.

Output

The output cases are to appear in the same order in which they appear in the input. For each case, you are to print **Case c : Jar Jar can fit b bricks in the box.** c and b are decimal integers. c is the number of the case being processed, beginning with 1; b is the number of bricks Jar Jar can pack in that case. The statement should be followed by two <EOL>'s, which is to say that a blank line should follow every output case.

Sample Input

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24 12 90      8 6 30
100 100 100  2 2 200
0 0 0
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Sample Output

Case 1: Jar Jar can fit 18 bricks in the box.

Case 2: Jar Jar can fit 0 bricks in the box.