Problem B. Boys and Girls

Each year, the Anonymous University helds a student team competition in informatics. Each team consists of three students, which is the same with the ICPC rules.

Traditionally, the best competitors of this university are girls, and they outnumber boys significantly. This year, boys have raised their voice and a new rule was made: each team must consist of exactly one boy and exactly two girls!

To make the students' lives a bit more difficult, the dean of the university has decided to send K of the competitors on an internship in a distant country. Those competitors will not be able to compete.

Given the number of female competitors M, the number of male competitors N, and the number of competitors which have to be sent on an internship K, the dean has to create the maximum number of teams which will be able to attend the competition. Write a program that does the job for the dean.

Input

Your input consists of an arbitrary number of records, but no more than 10,000.

Each record is a line containing three integers M $(0 \leq M \leq 1{,}000{,}000)$, N $(0 \leq N \leq 1{,}000{,}000)$ and K $(0 \leq K \leq M + N)$, each separated by a space.

The end of input is indicated by a line containing only the value -1.

Output

For each input record, print the maximum number of teams which can be formed.

Example

Standard input	Standard output
9 3 7 6 4 1 2 8 6 -1	1 3 1

Explanation of the example

For the first example: If the dean sends 7 girls to the internship, 2 girls and 3 boys are left, so the dean can form 1 team. This is the optimal solution.

Time Limit

1 second.