6418 Fitness Training

John and Mary are trying to get fit. John likes to cycle, and he wants to ride A kilometres today. Mary likes to run, and she wants to run B kilometres today (B is less than A). They now want to select a circular training route, which they will go around as many times as necessary to achieve their distance targets. They have found possible routes of lengths $1, 2, \ldots, M$. They want to choose a route such that they will end up in the same place at the end of the day for a celebratory drink (see the example for details). Find the longest route they can use.

Example

Suppose $A = 105$, $B = 42$ and $M = 10$. If they use a 10-kilometre route, then John will make 10 full circuits and then finish 5 kilometres along the route, while Mary will make 4 full circuits and finish 2 kilometres along the route. Since they don't finish in the same place, this is not acceptable. However, with a 9 kilometre route, John will make 11 full circuits and finish 6 kilometres along the route, while Mary will make 4 full circuits and also finish 6 kilometres along the route. The longest valid route in this case is thus 9.

Input

The input describes a number of test cases. Each line consists of the three positive integers A, B and M, separated by single spaces. The end of input is marked by a line containing only the value '-1'.

There are at most 20 test cases, and in each test case $1 \le B < A \le 200$ and $1 \le M \le 200$.

Output

For each test case, print out a single line containing the length (in kilometres) of the longest valid circuit.

Sample Input

```
105 42 10
103 42 10
100 50 100
-1
```

Sample Output

```
9
1
50
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