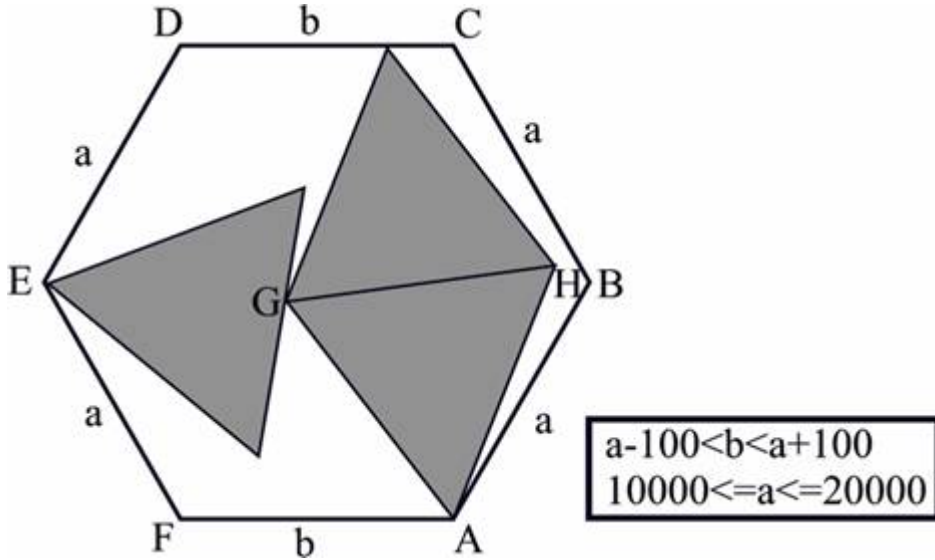


Stan is in deep shock as nobody likes his problems anymore, and so with his killer instinct of problem-setter he sets out again to set pure geometric+numerical problems that will irritate everyone once again as it did three years ago. With a Mardell effect he tells “MOO! HAA! HAA, all the geometry haters I will make you panic once again”. In reality the problem is not that bad at all, just look at the picture below:



In the picture you can see three equilateral triangles in a hexagon. All the angles of this hexagon are equal to one another. The sides $AB=BC=DE=EF=a$ and $AF=CD=b$. In spite of the legend, the value of a is within 100000 and 200000 and the value of b is within the range -5000 to $+5000$ of the value of a . In this picture you can see two triangles having a common edge GH and so they actually create the shape of a diamond. The bottom corner of that diamond is coincident with point A . One corner of the third triangle is coincident with point E . All these three triangles are congruent. Given the value of a and b your main job is to determine the maximum possible size of the side of the equilateral triangles, keeping the orientation as shown in the picture above. By keeping the orientation I mean the bottom corner diamond must be coincident with A , one corner of the third triangle must be coincident with E and the third triangle must touch the diamond at a point G , where G is actually another corner of the diamond.

Input

The input file contains at most 200 lines of inputs.

Each line contains three integers a ($100000 \leq a \leq 200000$), $start$, end ($-5000 \leq start \leq end \leq 5000$). Input is terminated by a line containing three zeroes.

Output

Suppose if $b = a + k$, then the largest possible side of the equilateral triangle is denoted by S_k . In this problem for each line of input except the last one you will have to find the value of

$$\sum_{k=start}^{end} S_k$$

and print the nearest integer of this value in a single line.

Sample Input

```
100000 -10 10
100001 -10 10
0 0 0
```

Sample Output

```
2122714
2122735
```