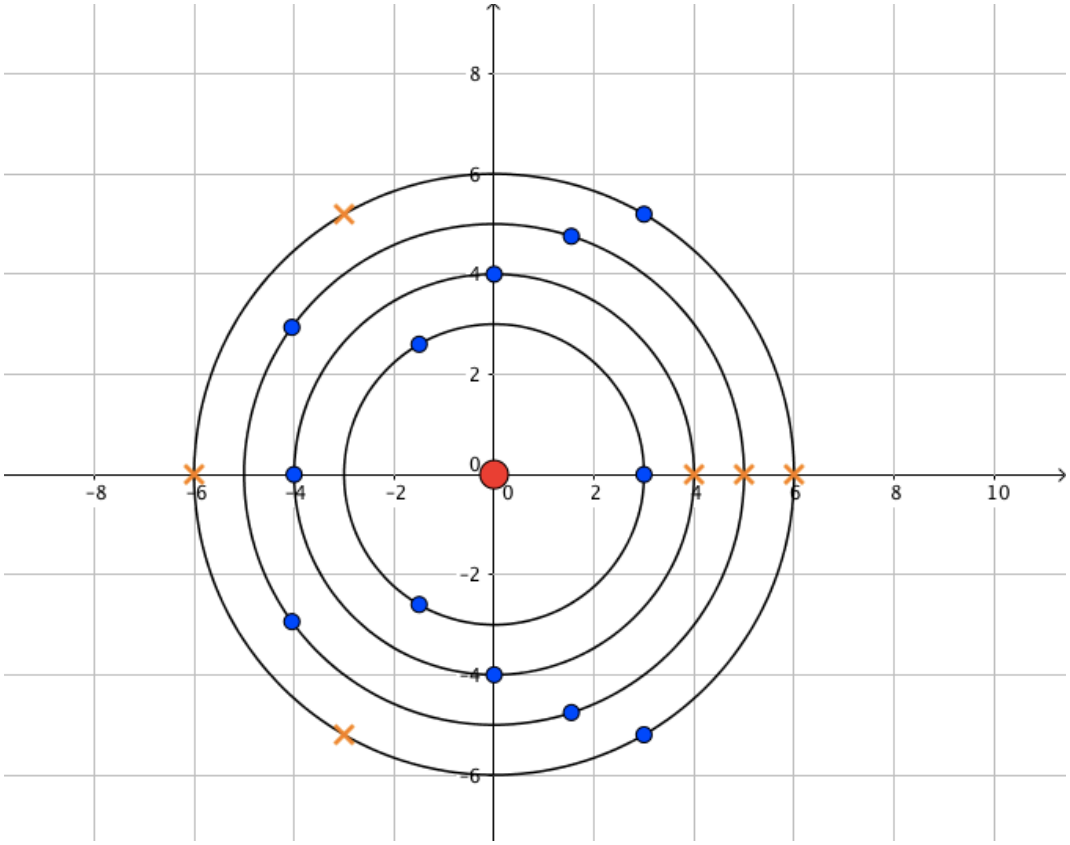
Problem D. Dome

In a 2D plane, there is a concert hall which has a circle shape. The stage is on the origin. Also, there are circle(s) with radius $a, a+1, \cdots, b-1, b$ centered at the origin, which contains the seats. A circle with radius r contains r seats, and the k-th $(1 \leq k \leq n)$ of them is assigned at $\left(r\cos\left(\frac{2\pi k}{n}\right), r\sin\left(\frac{2\pi k}{n}\right)\right)$.

However, it would be bad for the audience if they cannot see the stage because of other seats. So, all seats which has at least one seat on the line segment connecting the origin(stage) and itself are not for sale.

So for example, if $a = 3$ and $b = 6$, there are $3 + 4 + 5 + 6 = 18$ seats in total, but only $18 - 6 = 12$ seats are for sale.



Given a and b, write a program that calculates the number of seats being sold in this concert hall.

Input

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

Each record is a line consisting of two integers a and b $(1 \leq a \leq b \leq 2000)$.

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

Output

For each record, print a line containing the number of seats being sold in this concert hall.

Example

Standard input	Standard output
3 6 5 5 1 2 -1	12 5 2

Time Limit

2 seconds.