CMPUT 274 - Tangible Computing
Morning Problem: Lawn Mowing

Description

Bob has just started up a lawn mowing service and has been getting amazing reviews for his special lawn mowing technique. Bob mows his lawns in a very peculiar way, he starts in the middle and creates a perfect circle outward until he hits one edge of the lawn, he then mows the remaining lawn in connected sections.

The issue is, Bob believes he is overcharging people for his work. He charges a different rate for each section of lawn he mows.

The cost for mowing the initial circle is ¢$2 * r$, with r being the radius of the circle.

For the remaining k sections of lawn the price is as follows, the $i-th$ section costs ¢$4*l*w*i$, with l and w being the length and width of a section respectively. For our purposes all lawns that bob is mowing are rectangular and i begins at 1.
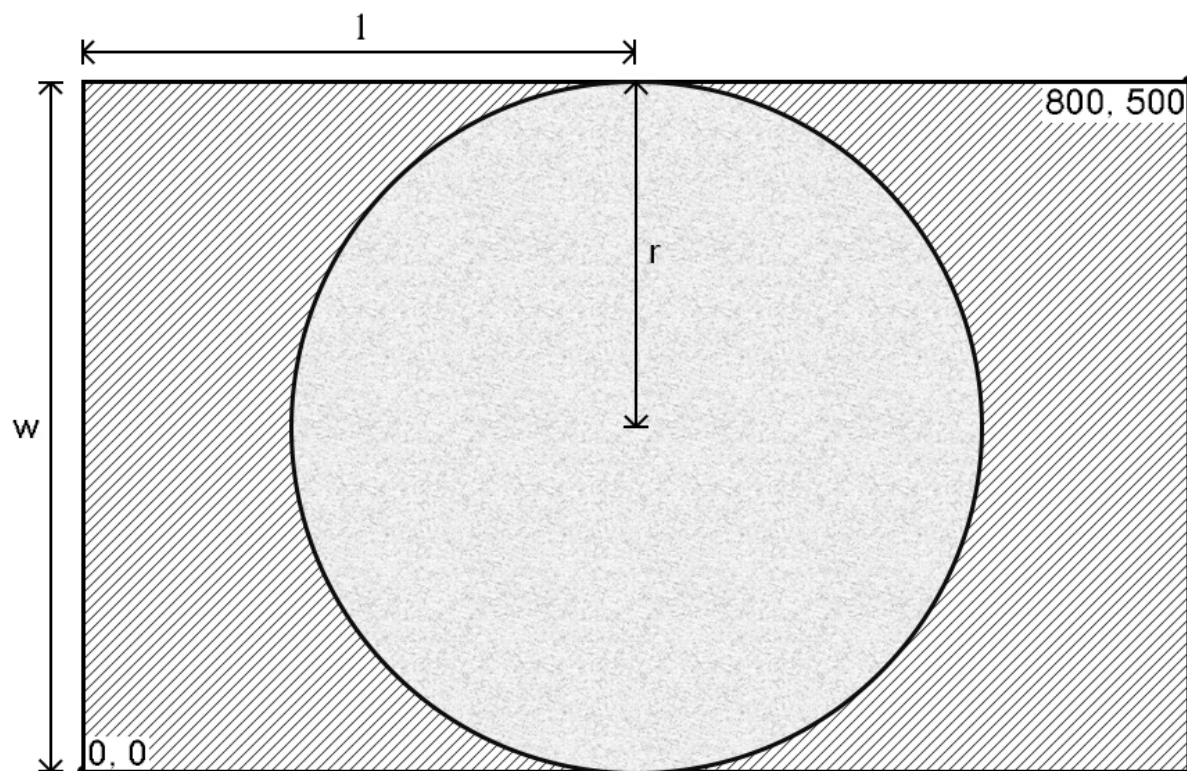

Figure 1: See Sample 1.

Input

The only line of input will contain two space separated integers l and w, $(1 \le l, w \le 1,000)$, the length and width of the entire lawn.

Output

Output should consist of one line containing a single integer, the amount of money (in cents) Bob should charge for mowing this lawn.

Sample Input 1

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800 500
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Sample Output 1

```
2400500
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Explanation:

The radius of the circle is 250, ¢2 * 250 = ¢500.

There are two remaining connected sections, the costs of mowing these sections are
¢4 * 400 * 500 * 1 = ¢800,000 and ¢4 * 400 * 500 * 2 = ¢1,600,000.

In total, that is ¢500 + ¢800,000 + ¢1,600,000 = ¢2,400,500.

Sample Input 2

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79 97
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Sample Output 2

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46057
```

Explanation:

The radius of the circle is 39.5, ¢2 * 39.5 = ¢79.

There are two remaining connected sections, the costs of mowing these sections are
¢4 * 79 * 48.5 * 1 = ¢15,326 and ¢4 * 79 * 48.5 * 2 = ¢30,652.

In total, that is ¢79 + ¢15,326 + ¢30,652 = ¢46057.