## Bridge Building

Find a place to build a bridge over the river, so as to minimize the length of the shortest route between two cities A and B, located on opposite sides of the river.

Figure

## Input

There is exactly one line of input, containing four integers $a, b, c$, and $h(10 \leq a, b, c, h<$ 1000000), separated by spaces. a - the distance from city $A$ to the river (the length of segment AE in the figure), $b$ - the distance from city $B$ to the river (the length of segment $B G$ in the figure), $c$ the distance between $A$ and $B$ along the axis parallel to the river (the length of segment $B F$ in the figure) and h - the width of the river ( CD in the figure).

## Output

Your program should write a single number to the standard output, equal to the length of the shortest path between $A$ and $B$ using the bridge, accurate up to two digits after the decimal dot.

## Example

## Input:

10129010
Output:
102.65

## Scoring

For solving this problem you will score 10 points.

