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Coding Arena

<**C✳deVita/**>
the TCS Coding Contest

A   B   C   D   **E**   F   G   H

Problem : Optimum Cost Calculator

Time Left

05 52 56
hr   min   sec

Rules & Regulations

A town A is located on a river. We have to send cargo to town B which is located 'a' kilometers downstream and 'd' kilometers from the river. Government wants to construct a sea link between B and the river such that the cost of transportation of goods from A to B is the cheapest. The transport cost of a unit of cargo per kilometer by waterway is half the cost incurred by taking the highway.

Your task is to help the government find a point in the river from which to construct a highway to town B so that the government's objective of reducing transportation cost is achieved. More specifically, calculate the distance from town A where the highway has to be constructed and the length of the highway to be constructed.
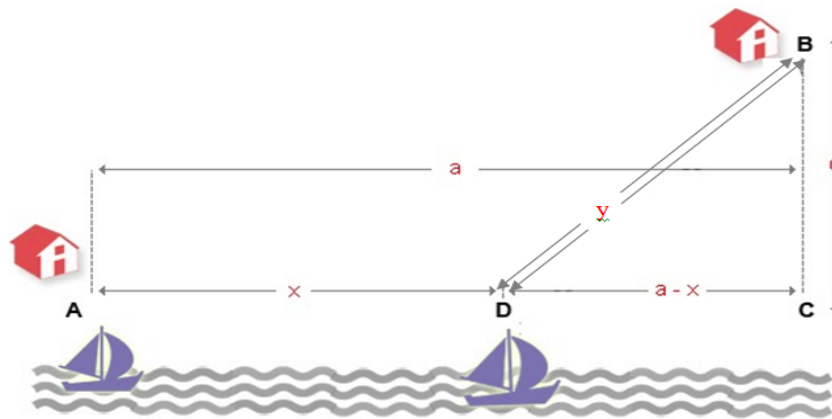

Fig:Sea link Planning

Input Format:

First line contains the distance between A and C along the river denoted 'a'
Second line contains the distance between C and B along the road denoted by 'd'

Output Format:

Print the distance of the point in the river denoted by D from Town A.
Print the length of the highway that needs to be built from D to B.

OR

Print "Invalid Input", if any constraint is violated

Constraints:

$0 < a <= (57 * d)$

$0 < d <= (1.7 * a)$

Calculations and printing of output should be done upto 11-digit precision

Sample Input and Output

SNo.	Input	Output
1	50 10	X= 44.22649730810 Y= 11.54700538379

| 2 | 40
10 | X= 34.22649730810
Y= 11.54700538379 |
| 3 | 172
3 | Invalid Input |

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.

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Submit Answer

☐ I , **SAI PAYAVULA** confirm that the answer submitted is my own.

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