## Q7. Height of Building (15 marks):

You need to determine the height of a building without direct access to its top, in this case the trigonometry comes to the rescue. You are equipped with a very accurate measuring tool that allows you to measure both the horizontal distance between you and the base of the building and the angle of elevation from your position to the top of the building. Your task is to develop a program that calculates the height of the building based on these measurements and don't forget to offset your own height which is 1.80m.
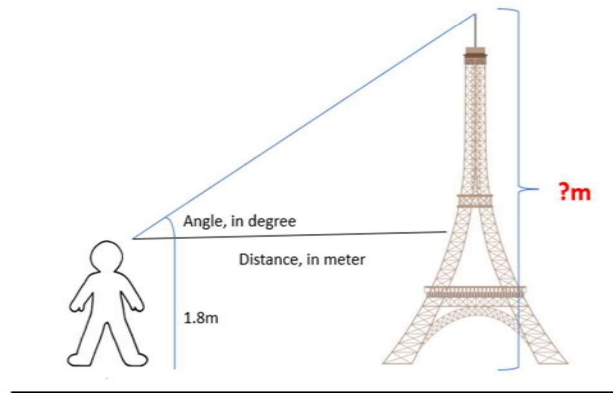
Write a programme to

Input, in sequence

(1) The horizontal distance between you and the building's base, in meters, and this distance is not more than 200.
(2) The angle of elevation from your position to the top of the building, in degrees, and this degree is no more than 45 degrees.
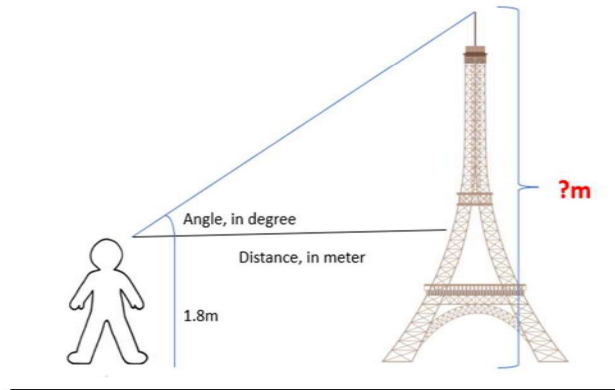
Output

The calculated height of the building, in metres, rounded to two decimal places of precision.

Hint

The trigonometric formula to calculate the height is: height = distance * tan(angle).
Moreover, 1 radian is equal to 180/π degrees.

试题 7. 建筑的高度（15 分）：

你需要在无法接触到建筑物顶部的情况下测量建筑物的高度，这时三角学就可派上用场了。你配备了一款非常精确的测量工具，可以同时测量你与建筑物底部之间的水平距离以及从你的位置到建筑物顶部的仰角。你的任务是写一个程式，根据这些测量结果计算建筑物的高度。在过程中，请不要忘记将你自己的身高 1.80 米进行抵消。

试写一程式以

依序输入

(1) 你与建筑物底部之间的水平距离，以米为单位；此距离不超过 200。
(2) 从你的位置到建筑物顶部的仰角，以度为单位；此仰角不超过 45 度。

输出

计算得出的建筑物高度，以米为单位，保留两位小数的精度。

提示

用于计算高度的三角学公式是：高度 = 距离 * tan(角度)。
此外，1 弧度等于 $180/\pi$ 度

Example (例子)

Input (输入)	Output (输出)
30 15	9.84
55 10	11.50
75 20	29.10