

Problem A. Counterclockwise Rotation

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

In an xy -coordinate plane whose x -axis is oriented to the right and whose y -axis is oriented upwards, rotate a point (a, b) around the origin d degrees counterclockwise and find the new coordinates of the point.

Constraints

- $-1000 \leq a, b \leq 1000$
- $1 \leq d \leq 360$
- All values in input are integers.

Input

Input is given from Standard Input in the following format:

a b d

Output

Let the new coordinates of the point be (a', b') . Print a' and b' in this order, with a space in between.

Your output will be considered correct when, for each value printed, the absolute or relative error from the answer is at most 10^{-6} .

Sample 1

Input	Output
2 2 180	-2 -2

When $(2, 2)$ is rotated around the origin 180 degrees counterclockwise, it becomes the symmetric point of $(2, 2)$ with respect to the origin, which is $(-2, -2)$.

Sample 2

Input	Output
5 0 120	-2.49999999999999991182 4.3301270189221936

When $(5, 0)$ is rotated around the origin 120 degrees counterclockwise, it becomes $(-\frac{5}{2}, \frac{5\sqrt{3}}{2})$.

This sample output does not precisely match these values, but the errors are small enough to be considered correct.

Sample 3

Input	Output
0 0 11	0.00000000000000000000 0.00000000000000000000

Since (a, b) is the origin (the center of rotation), a rotation does not change its coordinates.

Sample 4

Input	Output
15 5 360	15.0000000000000000177636 4.9999999999999995

A 360-degree rotation does not change the coordinates of a point.

Sample 5

Input	Output
-505 191 278	118.85878514480690171240 526.6674369978654