

PROGRAMMING CONTEST - TEST 2

Problem A: GCD and LCM

Problem Statement

Given two positive integers `a` and `b`, your task is to compute their Greatest Common Divisor (GCD) and Least Common Multiple (LCM).

The **Greatest Common Divisor** is the largest positive integer that divides both `a` and `b` without leaving a remainder.

The **Least Common Multiple** is the smallest positive integer that is a multiple of both `a` and `b`.

Input

Two space-separated positive integers, `a` and `b`.

Output

Two lines of output:

- The first line must be in the format: `GCD: <value>`
- The second line must be in the format: `LCM: <value>`

Constraints

- `1 <= a, b <= 10,000`

Sample Cases

Input	Output
12 18	GCD: 6 LCM: 36

Input	Output
75	GCD: 1 LCM: 35

Problem B: Taxi Fare Calculator

Problem Statement

A taxi company has a specific pricing model based on the distance traveled. Your task is to write a program that calculates the total fare for a given distance.

The pricing rules are as follows:

- **Opening Fare:** The first kilometer costs \$1.50.
- **Standard Rate:** From the 2nd kilometer up to and including the 10th kilometer, the rate is \$1.00 per kilometer.
- **Long-Distance Rate:** For any distance over 10 kilometers, the rate is \$0.75 for each additional kilometer.

Input

A single floating-point number `distance` , representing the total distance traveled in kilometers.

Output

The total fare, printed in the format: `Total Fare: $X.XX` , rounded to two decimal places.

Constraints

- `0.0 < distance <= 500.0`

Sample Cases

Input	Output
0.5	Total Fare: \$1.50
8.0	Total Fare: \$8.50
15.0	Total Fare: \$14.25

Problem C: Rock, Paper, Scissors

Problem Statement

You are asked to referee a game of Rock, Paper, Scissors between two players. Given the choice of each player, determine the winner.

The rules are:

ĐỪNG LÀM CÂU 3, CÂU NÀY HƠI CĂNG

- Rock beats Scissors
- Scissors beats Paper
- Paper beats Rock

Input

Two lines of input.

- The first line contains the choice of Player 1.
- The second line contains the choice of Player 2.

Each choice will be one of the following lowercase strings: "rock", "paper", or "scissors".

Output

A single line declaring the result: "Player 1 wins", "Player 2 wins", or "It's a tie".

Constraints

- Input strings will always be one of the three valid choices.

Sample Cases

Input	Output
rock scissors	Player 1 wins
paper paper	It's a tie
scissors rock	Player 2 wins

Problem D: String Normalization

Problem Statement

Write a program that processes a given line of text by normalizing its whitespace and converting it to uppercase.

The rules are:

1. **Convert to Uppercase:** All alphabetic characters in the string must be converted to their uppercase form.
2. **Normalize Whitespace:** Remove any spaces at the beginning and end of the string. Any sequence of multiple spaces between words must be replaced with a single space.

Input

A single line of text.

Output

The transformed string, with all letters in uppercase and all whitespace normalized.

Constraints

- The input string will contain only letters and spaces.
- The maximum length of the string is 255 characters.

Sample Cases

Input	Output
xin chao cac ban	XIN CHAO CAC BAN
hello world	HELLO WORLD
mlxED CaSe with messy spacing	MIXED CASE WITH MESSY SPACING