

Change scale of Temperature

Assignment 0

Computer Programming

Due date: 4 September, 2018

Problem Statement:Pranay is doing research in his lab involving some chemical reactions,he has a thermometer which shows reading $l1$ at freezing point of water and $u1$ at boiling point of water.Now he needs to send the temperature to another organization where they use a thermometer which shows reading $l2$ at freezing point of water and $u2$ at boiling point of water.Help him change the readings so as to match with the scale used by the organization. Given $l1,u1,l2,u2$ and the initial temperature T measured, you need to give the corresponding reading in the second scale.

Input

Input has a single line with 5 spaced integers $l1,u1,l2,u2,T$ respectively

Output

Output single decimal upto 2 decimal points.

Constraints

all the given numbers lie between -100000 and 100000

Sample Test Case

Input	Output
0 10 100 200 4	140.00