Introduction to C++ and Basic Syntax

Write C++ code for solving the tasks on the following pages.

Please follow the exact instructions on uploading the solutions for each task.

Task 1 – Order two numbers

Write a program that reads two INTEGERS from the console and prints them in increasing order.

Examples

Input	Output
123 321	123 321

Task 2 – Product sign

Write a program that show the sign(+ or -) of the product of THREE REAL numbers without calculating it.
The program should read 3 real numbers from the console and should print the sign of their product
(i.e. the sign of the number resulting from the multiplication of the 3 numbers). If the product is 0, print +.

Examples

Input	Output
1 2 0 1 -1 1	+ -

Task 3 – Quadratic equation

Write a program that enters the coefficients a, b and c of quadratic equation
a*x^2 + b*x + c = 0

and calculates and prints its real roots. Note that quadratic equations may have 0, 1 or 2 real roots. You can check your program against this:
https://www.mathsisfun.com/quadratic-equation-solver.html
The numbers a, b and c will be entered on a single line from the console.
If the quadratic equation has no real roots(e.g. if the Discriminant is less than 0), print "no roots", if it has one real root print it, if it has two roots, print them on a single line, separated by a single space.

$D = b^2 - 4ac;$
$x1 = (-b + \sqrt{D}) / 2a;$
$x2 = (-b - \sqrt{D}) / 2a;$

Examples

Input	Output
2 5 -3 10 1 3	0.5 -3 no roots

Task 4 – 1 to N

Write a program that reads the integer number N from the console and prints all numbers from 1 to N
(i.e. in the range [1,N]) to the console on a single line.
The number N will always be larger that or equal to 1.

Examples

Input	Output
1 10	1 1 2 3 4 5 6 7 8 9 10

Task 5 – Min and Max

Write a program that reads an integer number N, then a line of N integers, and prints the minimum and maximum of those integers

Examples

Input	Output
2 -1 5	-1 5
7 5 3 44 21 69 2 10	2 69

Task 6 – Greatest Common Divisor

Write a program that calculates the greatest common divisor (GCD) of given two numbers. Hint: you can use the Euclidean algorithm.
The two integers number will be entered on a single line from the console, separated by a single space.
Find and print their GCD.

Examples

Input	Output
10 25	5
50 50	50