import math

# Input coefficients

a = float(input("Enter the coefficient a: "))

b = float(input("Enter the coefficient b: "))

c = float(input("Enter the coefficient c: "))

# Calculate the discriminant

discriminant = b\*\*2 - 4\*a\*c

# Check if the discriminant is positive, zero, or negative

if discriminant > 0:

# Two real and distinct solutions

root1 = (-b + math.sqrt(discriminant)) / (2\*a)

root2 = (-b - math.sqrt(discriminant)) / (2\*a)

print("Two real solutions:")

print(f"Root 1: {root1}")

print(f"Root 2: {root2}")

elif discriminant == 0:

# One real solution (repeated)

root1 = -b / (2\*a)

print("One real solution (repeated):")

print(f"Root: {root1}")

else:

# Complex solutions

real\_part = -b / (2\*a)

imaginary\_part = math.sqrt(abs(discriminant)) / (2\*a)

print("Complex solutions:")

print(f"Root 1: {real\_part} + {imaginary\_part}i")

print(f"Root 2: {real\_part} - {imaginary\_part}i")