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def equation(x):
    return x**2 - 4 # Replace with your unique equation

def bisection_method(a, b, tolerance, max_iterations):
    iteration = 0
    while (b - a) / 2 > tolerance and iteration < max_iterations:
        c = (a + b) / 2
        if equation(c) == 0:
            break
        elif equation(c) * equation(a) < 0:
            b = c
        else:
            a = c
        iteration += 1
    return c

# Example usage:
a = 0
b = 3
tolerance = 0.0001
max_iterations = 100

result = bisection_method(a, b, tolerance, max_iterations)
print("Root:", result)
```