Quadtratic equation/formula calculator

Objective:

Using the input of the user (roots), calculate the quadratic equation.

Complexity level:

* Medium

Scenario:

* John Doe is a student in a mathematics class.
* The student wants to be able to determine the equation of the quadratic curve from the roots.

Problem statement

1. Write an algorithm to take the input of the roots and work backwards to get the equation *(medium).*
2. Write an algorithm that codes for the quadratic formula, and solves for the roots based on the equation ax2+bx+c=f(x).

Expectation outcomes:

Practice a vital part of mathematics and create a useful tool which combines the concept of algebra and software.

Reference URL:

1. Protters & Morrey: " Calculus and Analytic Geometry. First Course".
2. Washington, Allyn J. (2000). Basic Technical Mathematics with Calculus, Seventh Edition. Addison Wesley Longman, Inc. [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [0-201-35666-X](https://en.wikipedia.org/wiki/Special:BookSources/0-201-35666-X) .
3. Ebbinghaus, Heinz-Dieter; Ewing, John H. (1991), [Numbers](http://books.google.com/books?id=OKcKowxXwKkC&pg=PA77), Graduate Texts in Mathematics 123, Springer, p. 77, [ISBN](https://en.wikipedia.org/wiki/International_Standard_Book_Number) [9780387974972](https://en.wikipedia.org/wiki/Special:BookSources/9780387974972) .
4. Himonas, Alex. [Calculus for Business and Social Sciences](http://books.google.com/books?id=1Mg5u98BnEMC&q=%22left+as+an+exercise%22+and+%22quadratic+formula%22&dq=%22left+as+an+exercise%22+and+%22quadratic+formula%22&hl=en&sa=X&ei=6CJbUu2aFMylkQei6YGABA&ved=0CDMQ6AEwATgK), p. 64 (Richard Dennis Publications, 2001).