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CSE 13S

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Assignment 1

1. 16

2. 26

3. 38

4. When I try to compute √-3, my program stops responding and nothing happens regardless of what I type in the terminal until I terminate the program.

5. Since we are using Newton's method for finding the square root, the code can't handle finding the square root of negative numbers as Newton's method is intended for positive numbers. Hence, there's a problem with the initial guess y = 1.0 as the formula relies on dividing y and a positive y would not correctly calculate negative values.

6. 1) Modify the my_sqrt() function with an if statement in the beginning to check if the input is negative and return an error message if it is.

   2) Restrict the function usage to non-negative inputs using an assert statement such as assert >= 0.

   3) Before iteration, implement an if statement that checks if the number is negative, and if it is have it execute an alternative function that explicitly handles square roots of negative numbers.