The code used to complete this problem set is attached in the appendix below.<sup>1</sup>

1. Problem 1:

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<sup>&</sup>lt;sup>1</sup>We gratefully acknowledge a conversation with Michael Nattinger that helped us to find an error in applying the Newton method.

## Due: December 6, 2021

## Appendix

The first codefile named "runfile.jl" runs the code.

The second codefile named "functions.jl" contains the relevant functions.