Problems
1. Do problems 6 and 8 on p. 283 of your textbook. For problem 6 also:
   a. prove that $\phi_i$ has a fixed point if and only if $f$ has a root, and
   b. check for each $\phi_i$ if the conditions for existence and uniqueness of a fixed point are satisfied.

Program
1. Program the fixed point iteration algorithm. Apply your program to at least two fixed-point methods for problem 8 on p. 284. Use both absolute error and relative error as a stopping criteria and tolerance of $10^{-5}$. Allow a maximum of 100 iterations.

* Math 6630.