Exercise Abbott 4.5.2:

Exercise Abbott 4.5.5 (b):   You may assume that you have found a sequence of nested intervals $I_k = [a_k, b_k]$ with $f(a_\rangle < 0$ and $f(b_k) \geq 0$ and $|I_{k+1}| = |I_k|/2$, where $|\cdot|$ denotes the length of the interval.

  For those of you in Numerical Analysis, this proof of the IVT mirrors the bisection method for finding roots!

Exercise Abbott 4.4.3:

Exercise Abbott 4.2.10: