Hints for exercises in chapter 15

Exercise 15.2.6(d). Proceed by induction, using the recursion in (c).

Exercise 15.7.1. Consider the sequence $0, a_1, a_1 + a_2, \ldots, a_1 + \cdots + a_n \pmod{n}$, and use the pigeonhole principle.

Exercise 15.7.3. Remove the first greedily constructed increasing subsequence starting with a_1, so the second term is a_r, where r is the minimal integer for which $a_r > a_1$. Suppose this has length ℓ. If the remaining subsequence has parameters m', n' show that $n \geq n' + 1$ and $m \geq \max\{m', \ell\}$. Then complete the proof by an induction hypothesis.