

## Chapter 2 outline:

- ▶ Mathematical sequences and Python lists (last week Wednesday)
- ▶ Recurrence relations and recursive functions (last week Friday)
- ▶ Functions on lists (**today**)
- ▶ More about functions on lists; sorting (Wednesday)
- ▶ Arrays, vectors, and intervals (Friday)
- ▶ Review for test (next week Monday)
- ▶ Test on Chapters 1 & 2 (next week Wednesday, Sept 24)

## Today:

- ▶ Hints on the homework
- ▶ Recursive list-to-value functions
- ▶ Recursive list-to-list functions

The ideas introduced in Sections 2.2 (last time) and 2.3 (today and next time) include

- ▶ Recursion, or defining a object or process self-referentially.
- ▶ Decision-making using conditional expressions and statements.
- ▶ Storing values in local (temporary) variables so that the values can be reused instead of recomputed.
- ▶ Algorithms for building sets and lists recursively.
- ▶ Algorithms for processing lists recursively.
  - ▶ List-to-value
  - ▶ List-to-list
  - ▶ Sorting lists

**For next time:**

*Do Exercises 2.3.(2,4,5,9,10).*

*(All programming—nothing on paper this time)*

*Re-read Section 2.3 as necessary*

*(No quiz)*