

Chapter 6 outline:

- ▶ Introduction, function equality, and anonymous functions (last week Wednesday)
- ▶ Image and inverse images (last week Friday)
- ▶ Function properties and composition (Monday)
- ▶ Map, reduce, filter(**Today**)
- ▶ Cardinality (Friday)
- ▶ Countability (next week Monday, Nov 18)
- ▶ Review (next week Wednesday, Nov 20)
- ▶ Test 3, on Ch 5 & 6 (next week Friday, Nov 22)

Today:

- ▶ Filter and map
- ▶ Reduce
- ▶ Pipelines
- ▶ Searching and generating.

Lessons

- ▶ Functions are components.
- ▶ When used on sets, `filter` defines a subset and `map` computes an image.
- ▶ When used on lists, `filter` selects certain data points and `map` applies an operation or transformation on all of them.

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- ▶ `reduce` applies a function sequentially over the items in a collection (or iterable).

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- ▶ When used on sets, `filter` defines a subset and `map` computes an image.
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- ▶ `reduce` applies a function sequentially over the items in a collection (or iterable).
- ▶ Use pipelines to chain transformations, such as with `map`, `filter`, and `reduce`.

For next time:

Do Exercises 6.5.(1-5)

Read Section 6.6 at some point—it is your choice whether to read it before class on Friday or after class.

Take quiz (does not require having read Section 6.6, just need to remember informal definition of cardinality from Section 1.7)