

# Programming Languages Topics

- Variables (binding/bound/free)
- Functions (calling a function is substitution)
- Higher-order functions (remarkably powerful)
- State-passing style (check out Continuation-passing style)
- Garbage Collection
- Type systems

# Programming Topics

- Tests, tests, tests, and yet more tests
  - Specification
- Refactoring
  - Reasoning about equivalences
- Data design drives function design (orange arrows)

**Thanks.**