Notes on Object-Oriented Programming in Python

MATH 8650

Fall 2018

Goals, Objectives, Principles

Design Goals

- ▶ Robustness
- ▶ Adaptability
- ▶ Reusability

Objectives

- ▶ Modularity
- ▶ Abstraction

Principles

- ▶ Encapsulation
- ▶ Inheritance
- ▶ Polymorphism

Principles

- ► Encapsulation
  - ► All data and operations associated with a type are defined together.
- ► Inheritance
  - ► A new data type can be defined in terms of a "parent" type.
  - ► New or modified data and operations.
- ► Polymorphism
  - ► Groups of data types have the same operations, but implemented differently.

Python Classes

https://www.csee.umbc.edu/courses/671/fall15/notes/
python/07python_classes.pdf

Polymorphism

https://pythonspot.com/polymorphism/