Announcements

- Thursday – TEST Booster
  - About 20 minutes during class
  - We will also have classwork
- Read for next time Chap. 13.5-13.7, 7.4
- Reading Quiz for next time

Abstract Class

- A class that cannot be instantiated
- Defines specifications for a class, but doesn’t have all the implementations
- Forces users to redefine methods
- Subclasses extend it
- May have abstract methods
  - There is no code
  - Subclasses that are not abstract must have a method of the same name with code

Inheritance hierarchy

- Mover and Bouncer are abstract classes
- Bouncer extends Mover
- BouncingBall and BouncingSmiley extend Bouncer
Polymorphism

• Ability to refer to objects of multiple types with varying behavior
• ArrayList<Mover> contains BouncingBalls and BouncingSmileys and RaceCars
• They are all subclasses of Mover
• Can’t create a new Mover. Why?

Classwork Today

• Finish Bouncing Smiley
• Write the RaceCar Class. Extends Mover.
  – RaceCars only move to the right
  – RaceCars are rectangular in shape
• Modify the Canvas class to create RaceCars