## **Specifications**

This task is about polymorphism.

- 1. Create 4 classes, namely Boat, Motorcycle, Truck and Car and a TestProgram (the latter will require the graphics template from the roadmap).
- 2. Each class should have the following instance variables:
  - a. brand, e.g. Ford
  - b. numWheels, e.g. 4
  - c. numSeats, e.g. 4

(note: the Boat class will **not** have the numWheels instance variable)

- 3. Each class needs to have the following methods:
  - a. Constructor(s)
  - b. toString()
  - c. draw (gc)
  - d. getBrand(), getNumWheels(), getNumSeats()
- 4. Create an abstract class called, Vehicle
  - a. Move the numSeats and brand instance variables to this class along with their getters.
  - b. Create an abstract method called, draw( GraphicsContext gc )
- 5. Create a TestProgram uses the graphics template from the roadmap.
  - a. Instantiate an ArrayList or a built-in array of type, Vehicle
  - b. Instantiate 1 instance of each of your 4 classes.
  - c. Add each variable to the array.
  - d. Write an enhanced for loop to visit each array element and call the draw routine. (match the product shot in figure 1, exactly)
- 6. Document your code.

