

SE1011: Half Exam 4 Name:

This is a closed-book, closed-computer, etc. exam. You may use one 8.5"x11" sheet of notes, which you will turn in with your exam. Review all questions before you get started. Use the page at the end of the exam for extra work. Write your name on the front of each page. The exam is printed double-sided. Show all work.

1. Consider the Dragster class that starts out as below

```
public class Dragster {  
    private double velocityMps;
```

- a. (10 points) Implement the `setVelocityMps(double vel)` method of this class:

 - b. (10 points) Implement the `equals(Dragster other)` method of this class. This method should return `true` if the two Dragsters have the same velocity.

2. (5 points) The main method is always declared static. **Give an example** of a line of code you cannot use in main because it is static. **Explain** why your line does not work.

3. (5 points) **Write an example** line of code that calls a constructor that could be used in a main method. **Describe** how your call to the constructor differs from a normal method call.

4. (20 pts.) **Complete** a Java main method that displays a GUI input box saying "Enter text:" If the user enters anything into the GUI dialog box, the program should display the message "You entered: _____", filling in the blank with what the user entered. Otherwise, (if the user enters nothing or hits **cancel**) the program should re-display the original dialog box. The redisplayed dialog box should behave exactly like the original dialog box. Use `JOptionPane.showInputDialog(...)` for user input (this method returns `null` if the user presses **cancel**) and `JOptionPane.showMessageDialog(null, ...)` for output.

```
public static void main(String[] ignored) {
```

```
}
```