CS 2510 Exam 1 – Summer 2012

Name: _____

Student Id (last 4 digits): _____

- Write down the answers in the space provided.
- You may use all syntax of Java that we have studied in class.
- For tests you only need to provide the expression that computes the actual value, connecting it with an arrow to the expected value. For example `s.method() -> true` is sufficient.
- Remember that the phrase "design a class" or "design a method" means more than just providing a definition. It means to design them according to the **design recipe**. You are *not* required to provide a method template unless the problem specifically asks for one. However, be prepared to struggle if you choose to skip the template step.

Good luck!

Score		30

Problem 1

A writing utensil may either be a pen or pencil. A pen has a color and an amount of ink, measured in microlitres (μl). A pencil has a graphite lead, measured in millimetres (mm).

Five microlitres of ink will write a line seven metres long, while a graphite lead of 3 millimetres will write a line 22 metres long.

A. Design a data representation of writing utensils.

B. Give three examples of writing utensils.

C. Design a method for writing utensils that determines how long of a line it can write.