

Name: \_\_\_\_\_

**First Programming Assessment**  
**CMP 230: Programming Methods I**  
**Lehman College– CUNY**  
**16 February 2010**

**Directions:**

- Include your name (as a comment) in your solution to each problem.
- Submit each solution on Blackboard, under “Programming Assessment I” in Assignments. Password is CMP230.

Problem 1a	7	
Problem 1b	8	
Problem 2a	5	
Problem 2b	10	
Problem 3a	5	
Problem 3b	5	
Problem 3c	10	
Total		50

- (a) Create a new Alice world in which an airplane flies across the sky. Add a method called `airplane.somersault()` to the airplane that causes the airplane to do a complete forward loop while moving forward a short distance (i.e. a somersault).
  - (b) Add a parameter to the method that controls the duration of the somersault and include several calls to it from my `first method` demonstrating it.
- (a) Create an Alice world with a `frog` (from the `Animals` gallery) where your frog hops forever.
  - (b) Using your frog world from above, add in a lake and have your frog hop towards lake as long as the distance is greater than 5 meters.
- (a) Create an Alice world with an island and a boat in the water.
  - (b) Write a `While` statement that causes the boat to move one meter towards the island as long as it is at least 2 meters from the island.
  - (c) Display the distance the boat has traveled while it is moving, using a 3D text object that stays visible in the upper portion of the display window.  
(Hint: use the `what as text` function to convert your variable into text that can be displayed on the screen).