Programming in Lisp
Lecture #1: Class Activity

Name: Name:

1. What will happen when each of the following is entered at the toplevel?
       a. > (1 2 3)

       b. > '(1 2 3)

       c. > '(Hello World)

       d. > ('Hello 'World)

       e. > 'Wumpus

       f. > Wumpus

2. Show the evaluation of the following expression, step by step.
       > (+ 31 (* 3 2) (/ 8 2) 9)

3. What is returned from the following?

    a. > (if (and t t) 'A 'B)

    b. > (if (and t nil) 'A 'B)

    c. > (if (or nil nil) 'A 'B)

    d. > (if (or nil t) 'A 'B)

4. Show the evaluation of the following input:

```
> (if (or (listp 1)
          (listp 2)
          (null nil)
          (not nil)
      )
      ;Then
      (listp '(1 2 3))
      ;Else
      nil
  )
```

5. Define a function to return the length of the hypotenuse of a right triangle, given the lengths of the other two sides as parameters. Hint: (sqrt x) returns the principal root of x, i.e.: (sqrt 4.0) returns 2.0.