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CSCI 330-54

Professor Ramnath

Homework 2

Lisp Questions:

1. (NOT (EQUAL 3 (ABS -3))) = NIL

2. (/ (+ 8 12) 2) = 10

3. (+ (\* 3 3)(\* 4 4)) = 25

7. (defun MILES-PER-GALLON (INITIAL-ODOMETER-READING FINAL-  
ODOMETER-READING GALLONS-CONSUMED)

(/ (- FINAL-ODOMETER-READING INITIAL-ODOMETER-READING)  
GALLONS-CONSUMED))

10. (third (the quick brown fox)), missing quote before the list. It should become  
(third '(the quick brown fox))

(list 2 and 2 is 4), missing quotes for 'and' and 'is'. It should be (list 2 'and 2 'is  
4)

(+ 1 '(length (list t t t t))), missing quotes before all t's and remove quote before  
length. It should become (+ 1 (length (list 't 't 't 't)))

(cons 'patrick (seymour marvin)), missing quote before second list (seymour  
marvin). It should be (cons 'patrick '(seymour marvin)).

(cons 'patrick (list seymour marvin)), missing quote before second words  
seymour marvin). It should become (cons 'patrick (list 'seymour 'marvin)).

20. (mystery '(dancing bear)) = (bear dancing)

(mystery 'dancing 'bear) = error, 2 arguments are given for x which only needs 1.

(mystery '(zowie)) = (NIL zowie)

(mystery (list 'first 'second)) = (second first)

21. (defun speak (x y) (list 'all 'x 'is 'y)) = Need to remove quote before x and y as those are the variables. Should be (defun speak (x y) (list 'all x 'is y)).

(defun speak (x) (y) (list 'all x 'is y)) = Need to remove individual quotes from (x) (y) and make into grouped (x y). Should be (defun speak (x y) (list 'all x 'is y)).

(defun speak ((x) (y)) (list all 'x is 'y)) = Need to remove individual quotes from (x) and (y) so it is only (x y) and to add quotes before all and is as well as remove quotes in front of 'x and 'y. Should be (defun speak (x y) (list 'all x 'is y)).

25. (list 'cons t nil) = (cons t nil)

(eval (list 'cons t nil)) = (T)

(eval (eval (list 'cons t nil))) = Undefined function

(apply #'cons '(t nil)) = (T)

(eval nil) = NIL

(list 'eval nil) = (eval nil)

(eval (list 'eval nil)) = NIL