csc324 Quiz #3 Tuesday 08 February 2000

Duration: 15 minutes

Aids allowed: None

Family Name: ______________________ **Lecturer:** Diane Horton

First Name: ______________________

Student #: ______________________

Tutorial (circle one):

A-F	G-Lee	Lef-Se	Sf-Z
Ana	Diana	Peeter	Sean

Grade: ____________

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1. What is the value of each of these expressions? Write "error" if it would produce an error.

`(funcall '> '(55 33))`	Answer:
`(funcall '> 55 33)`	Answer:
`(apply '> '(55 33))`	Answer:
`(apply '> 55 33)`	Answer:
`(eval '> '(55 33))`	Answer:
`(eval '> 55 33)`	Answer:

2. Consider the following function:

```
(defun sum (list)
    (cond ( (eq (length list) 1)
                (car list)
          )
          ( t    (+ (car list) (sum (cdr list)))
          )
    )
)
```

What is the value of `(sum '(1 2 5 -1 3))`? Answer:

What is the big-oh time complexity of a call to `sum` with a list of length n, in the worst case?

Answer:

3. Consider the following function:

```
(defun blah (h r c)
    (cond ( (null h) nil )
          ( (eq (car h) c)
                (car r)
          )
          ( t    (blah (cdr h) (cdr r) c) )
    )
)
```

What is the value of `(blah '(a b c) '(1 2 3) 'c)`? Answer:

What is the big-oh time complexity of a call to `(blah x y z)` in the worst case?
Define any variables that you introduce in your answer.

Answer: