CS61A Discussion 4: **???**

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CS61A Discussion 4: SPECIAL REVIEW EDITION

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Agenda

- 1. Week in Review
- 2. Quiz review
- 3. Review
- 4. Midterm thoughts

Length of today's section depends mostly on student q's

Week In Review

Midterm is today!

How was hw 2?

How was lab 4?

Attendance

Form: tinyurl.com/jerrydisc

Weekly question is: **Do you have any dietary restrictions?**

(There might be a surprise next week!)

Quiz Review

```
Quiz 1
```

```
def test():
    pop = False
    quiz = False
    while not pop or not quiz:
        quiz = quiz or (pop and 10) or 0
        pop = (pop and (not quiz)) or (20 and 30)
        print(pop, quiz)

# >>> test()
# ???
# Hint: not 10 == False
# Hint: not 2 and 2 or (order of ops)
```

Quiz Review

Quiz 2

def test(f, x):
 if f(x) % 2 == 0:
 return lambda g, x: g(lambda x: x * x, x)
 else:
 return f(x)

test(lambda s: s // 2, 20)(test, 7)

Hint: draw an environment diagram?

Quiz Review

```
Quiz 3
```

```
def quiz():
    return [[x for x in range(y)] for y
in range(3)]
```

```
# >>> print(quiz())
# ???
```

Review

What are you required to know for the midterm?

 Sum total of human knowledge (with an emphasis on the material covered up to Tues)



What Would Python Print?

Basic Facts

- Evaluated **in order** in the Python **interpreter**, not run from a .py file
 - Make sure you understand return vs. print
- If it errors, include everything before the error
- Various other rules are on your exam

Environment Diagrams

Basic Facts

- Should be straightforward since the rules never change
- If it errors, you (likely) did something wrong!
- Fundamental part of understanding 61A programs. Gets a bit more complicated once mutation comes into play (more on that in mt2!)



Disc 2 Pg 12

Coding Questions

Basic Facts

- Expect lots of **recursion**
- ~Three **main** possibilities:
 - Skeleton code
 - Cross-outs
 - Free write (unlikely?)

Test It

- 1. Check **domain** and **range**
 - Do the inputs and outputs make sense?
- 2. Check the **margins** (not the page margins, silly!)
 - Verify numbers for loop starts/stops and lists (will cover after MT1)
- 3. Check the **syntax** (count parens, brackets, etc.)
- 4. Check it all again

Recursion

Rules of Recursion

- 1. Define a **base case**
 - If it's not immediately obvious, pick one anyways
- 2. Break the problem into smaller but similar subproblems
- 3. Figure out how to **glue** subproblems together to solve our problem

Any Questions?

Cheat Sheets

I personally wouldn't recommend more than **one** (two-sided) cheat sheet. Any more is probably too cumbersome.

Midterm Thoughts

Some perspective:

- Yes, it will be challenging. But,
- Midterm is 50 pts, total grade is 300 pts (~%17)
- This test **will not** define who you are and/or whether or not you'll be successful in computer science.
- **Drop deadline this Friday**... grades won't be out (sorry), but solutions will be posted.

Logistics

Please double check your time and location!

Please bring your student ID

Try to arrive early. **DO NOT ARRIVE ON BERKELEY TIME.**

WE WILL START THE EXAM @ BERKELEY TIME. DO NOT ARRIVE ON BERKELEY TIME.

Midterm Thoughts

Miscellaneous non-cs advice:

- Do not skip meals or sleep for the midterm.
- Relax and do your best! You've all worked very hard :)