Lesson 23:

1. Quiz: Recursive Grammars

Not the long one.

1. Quiz: Rabbits Multiplying

def rabbits(n):

if n < 3:

return 1

elif n < 6:

return rabbits(n - 1) + rabbits(n - 2)

else:

return rabbits(n - 1) + rabbits(n - 2) - rabbits(n - 5)

1. Quiz: Spreading Udaciousness

def hexes\_to\_udaciousness(n, spread, target):

if n >= target:

return 0

else:

return 1 + hexes\_to\_udaciousness(n \* spread + n, spread, target)

1. Quiz: Deep Count

def deep\_count(p):

count = 0

for item in p:

count += 1

if is\_list(item):

count += deep\_count(item)

return count

1. Quiz: Feeling Lucky

def lucky\_search(index, ranks, keyword):

look = lookup(index, keyword)

if look:

relevant\_ranks = []

for item in look:

if item in ranks:

if not relevant\_ranks:

relevant\_ranks.append([item, ranks[item]])

else:

if relevant\_ranks[0][1] < ranks[item]:

relevant\_ranks.insert(0, [item, ranks[item]])

relevant\_ranks.append([item, ranks[item]])

return relevant\_ranks[0][0]

else:

return None