Lesson 12:

1. Quiz: Lists

p = [0, 1, 1]

1. Quiz: Mutating Lists

All but the first option.

1. Quiz: Product List

def product\_list(list\_of\_numbers):

product = 1

for number in list\_of\_numbers:

product = product \* number

return product

1. Quiz: Greatest

def greatest(list\_of\_numbers):

maximum = 0

for number in list\_of\_numbers:

if maximum < number:

maximum = number

return maximum

1. Quiz: Lists of Lists

def total\_enrollment(university\_data):

total\_students = 0

total\_tuition\_fees = 0

for school in university\_data:

total\_students += school[1]

total\_tuition\_fees += school[1] \* school[2]

return total\_students, total\_tuition\_fees

1. Quiz: Max Pages

def crawl\_web(seed, max\_pages):

tocrawl = [seed]

crawled = []

count\_crawled = 0

while tocrawl:

page = tocrawl.pop()

if page not in crawled:

union(tocrawl, get\_all\_links(get\_page(page)))

crawled.append(page)

count\_crawled += 1

if count\_crawled == max\_pages:

break

return crawled

1. Quiz: Max Depth

def crawl\_web(seed, max\_depth):

tocrawl = [seed]

crawled = []

next\_depth = []

depth = 0

while tocrawl and depth <= max\_depth:

page = tocrawl.pop()

if page not in crawled:

union(next\_depth, get\_all\_links(get\_page(page)))

crawled.append(page)

if not tocrawl:

tocrawl, next\_depth = next\_depth, []

depth += 1

return crawled

1. Quiz: Sudoku

def check\_sudoku(sudoku\_puzzle):

positive\_integers = list(range(1, len(sudoku\_puzzle) + 1))

for row in sudoku\_puzzle:

for value in row:

# Check if value should exist in the sudoku puzzle.

if value not in positive\_integers:

print("\nThe value " + str(value) + " does not belong in the sudoku puzzle.")

return False

# Check rows for duplicates

if row.count(value) > 1:

print("\nThe value " + str(value) + " occurs multiple times in the same row.")

return False

# Check columns for duplicates

column\_list = []

for rank in sudoku\_puzzle:

column\_list.append(rank[row.index(value)])

if column\_list.count(value) > 1:

print("\nThe value " + str(value) + " occurs multiple times in the same column.")

return False

print("\nAll tests passed!")

return True