

## Lab 9 What is the output (10 points)

Name (first and last)	NetID

**Problem 1:** Trace the output. Determine what will the output be when the program below is executed. Do not run the program! Specify the output exactly.

```
listA = [12, 9, 6, 34, 23, 90, 73]
listB = [67, 73, 12, 18, 64, 23, 19, 45, 29, 15, 90, 78, 31]
listC = []
listD = []
for num in listA:
    if num in listB:
        print (num, "is in both lists")
        listC.append(num)
    else:
        print (num, "in only in one list")
        listD.append(num)
print("common values: ", listC)
print("unique values: ", listD)
```

**Problem 2:**

Suppose you have a jar with 5 white marbles and 8 black marbles.

What is the probability of drawing a black marble?

What is the probability of drawing a white marble?

Add the two values from the previous questions? what value did you get? is that reasonable?

Suppose you draw one marble, put it back in the jar and then draw another marble

- what is the probability that both are black?
- what is the probability that both are white?
- what is the probability that the first is white and the second is black?

**Problem 3:**

A student comes to the exam completely unprepared. The test is multiple choice and for each question that are four possible choices.

Assuming that the chances of each answer A, B, C, and D being correct are equal, how many questions will she answer correctly if she randomly selects an answer? (Assume that there are 20 questions in the exam.)