You can find multiple choice review questions in D2L under: `Assessments->Quizzes`

For all questions, unless otherwise specified assume that there are no syntax errors in any programs or program fragments.

Short answer 1 (code writing):

JT's hint: Before looking at the answer make a real attempt at providing an answer. If you are drawing a blank then it indicates that you need to study the material from lecture as well as looking at the in class notes that you should be taking as you are following along in class. You will get far more out of the process if you try it out as if you were writing an actual exam question rather than just directly looking at the answer.

```
MIN_ID = 111111
MAX_ID = 999999

identificationNumber = -1

while ((identificationNumber < MIN_ID) or (identificationNumber >
  MAX_ID)):
    identificationNumber = int(input("ID number (%d-%d): "
      %(MIN_ID,MAX_ID)))
    if (identificationNumber < MIN_ID):
        print("ID of %d is too low" %(identificationNumber))
    elif (identificationNumber > MAX_ID):
        print("ID of %d has too high" %(identificationNumber))

print("ID #%d" %(identificationNumber))
```

Short answer 2 (code writing):

JT's hint: Before looking at the answer make a real attempt at providing an answer. If you are drawing a blank then it indicates that you need to study the material from lecture as well as looking at the in class notes that you should be taking as you are following along in class. You will get far more out of the process if you try it out as if you were writing an actual exam question rather than just directly looking at the answer.

The part that's different from SA1 to this one SA2 is **bolded.**

```
MIN_ID = 111111
MAX_ID = 999999
EXIT_CODE = -1

identificationNumber = 0

while (((identificationNumber < MIN_ID) or \
       (identificationNumber > MAX_ID)) and \
       (identificationNumber != EXIT_CODE)):
    identificationNumber = int(input("ID number (%d-%d): "
      %(MIN_ID,MAX_ID)))
    if (identificationNumber != EXIT_CODE):
        if (identificationNumber < MIN_ID):
            print("ID of %d is too low" %(identificationNumber))
        elif (identificationNumber > MAX_ID):
            print("ID of %d is too high" %(identificationNumber))

print("ID #%d" %(identificationNumber))
```

JT: a flag could potentially be used in the Boolean expression of the loop as one alternative solution. A flag could have also been used in the previous question as well but it's mentioned here because the Boolean expression is a bit more complex for this question than with the previous.

Short answer 3 (code trace):

JT's hint: Before looking at the answer make a real attempt at providing an answer. If you are drawing a blank then it indicates that you need to study the material from lecture as well as looking at the in class notes that you should be taking as you are following along in class. You will get far more out of the process if you try it out as if you were writing an actual exam question rather than just directly looking at the answer.

```
1 5
1 4
1 3
1 2
2 5
2 4
2 3
2 2
3 5
3 4
3 3
3 2
```

JT: as described in class each time that the outer loop executes, the inner loop executes from start to finish.

Short answer 4 (code trace):

JT's hint: Before looking at the answer make a real attempt at providing an answer. If you are drawing a blank then it indicates that you need to study the material from lecture as well as looking at the in class notes that you should be taking as you are following along in class. You will get far more out of the process if you try it out as if you were writing an actual exam question rather than just directly looking at the answer.

```
0 1
0 2
0 3
0 4
1 1
1 2
1 3
1 4
2 1
2 2
2 3
2 4
```

Short answer 5 (code trace, code analysis):

JT's hint: Before looking at the answer make a real attempt at providing an answer. If you are drawing a blank then it indicates that you need to study the material from lecture as well as looking at the in class notes that you should be taking as you are following along in class. You will get far more out of the process if you try it out as if you were writing an actual exam question rather than just directly looking at the answer.

```
This program calculates an exponent: x is raised to the 'yth' power
with the result stored in 'j'
```