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):

The following is a modification of an actual tax system.

- If income is $10,822 or less then you pay no income tax.
- Income over $10,822 up to and including 43,561 is taxed at 15%.
- For income more than $43,561, but not more than or at $87,123, the tax rate is 22%.
- For income more than $87,123, but lower than or at $135,054, the tax rate is 26%.
- For income is more than $135,054, the tax rate is 29%.

For the purposes of this question a person will only be classified into one of the above tax brackets e.g., a person earning $100,000 pays a 26% tax rate. Augment the program below (i.e. you need to use existing code not replace or duplicate it) so that it calculates and displays: the amount of tax owed and income after taxes have been deducted.

```
grossIncome = 0
taxesOwed = 0
incomeAfterTaxes = 0
taxRate = 0
grossIncome = int(input("Enter your yearly income: "))
# On an actual exam you would write your answer here
```

```
# End of answer space
taxesOwed = grossIncome * taxRate
incomeAfterTaxes = grossIncome - taxesOwed
print("Gross income $%d" %grossIncome)
print("<Less tax $%d>" %taxesOwed)
print("Income after taxes $%d" %incomeAfterTaxes)
```

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.

```python
# Write your answer here
# This can also be implemented by explicitly specifying the min and
# max of each tax bracket in
# conjunction with a logical AND operator
# e.g.
# if ((grossIncome <= 135054) and (grossIncome > 87123)):
#      taxRate = 0.26
if (grossIncome > 135054):
    taxRate = 0.29
elif (grossIncome > 87123):
    taxRate = 0.26
elif (grossIncome > 43561):
    taxRate = 0.22
elif (grossIncome > 10822):
    taxRate = 0.15
#Else body for no tax rate not needed because default is tax rate = 0%
```

Short answer 2 (code writing):

In order for someone to be hired for a job, the candidate must be a Canadian citizen ('c') and have one of the following: an 'applied' university degree ('bcomm' or 'bsc') or greater than ten years of work experience. Modify the following program so that the message 'hired' appears if the candidate meets the above qualifications and 'not hired' if the person does not.

```
citizen = input("Canadian citizen? (n = not citizen, c =
  citizen): ")
xp = int(input("Years of work experience: "))
degree = input("Type of university degree (ba, bcomm, bsc, bfa): ")


# On an actual exam you would write your answer here
```

```
# End of answer space
```

(Solution is on the next page)

```python
if (citizen == 'c') and \
    ((xp > 10) or \
    ((degree == 'bcomm') or \
    (degree == 'bsc'))):
     print("Hired!")
else:
     print("Not hired")
```

```python
if (citizen == 'c') and \
```