

PROBLEM 2-1 (5/5 points)

What does the following code print? Assume PyLab's estimation code is perfect - that is, if you calculate that it would print 0.25, type 0.25 into the box rather than something like 0.249999999999. You may type in strings with or without quotes.

```
a = 1.0
b = 2.0
c = 4.0
yVals = []
xVals = range(-20, 20)
for x in xVals:
    yVals.append(a*x**2 + b*x + c)
yVals = 2*pylab.array(yVals)
xVals = pylab.array(xVals)
try:
    a, b, c, d = pylab.polyfit(xVals, yVals, 3)
    print a, b, c, d
except:
    print 'fell to here'
```

You have used 1 of 3 submissions

PROBLEM 2-2 (1/1 point)

Consider the following sets of measurements and answer the following 3 questions:

- A.
- B.
- C.
- D.
- E.

Select the two lists that have the same mean and variance.

- ☐ A
- ☐ B
- ☐ C
- ☐ D
- ☐ E
- ☒ No two sets have the same mean and variance.

You have used 1 of 1 submissions

PROBLEM 2-3 (1/1 point)

Consider following Python functions:

```
def possible_mean(L):  
    return sum(L)/len(L)  
  
def possible_variance(L):  
    mu = possible_mean(L)  
    temp = 0  
    for e in L:  
        temp += (e-mu)**2  
    return temp / len(L)
```

Select the two lists that return the same values when passed into the `possible_variance` function that is defined above.

- ☐ A
- ☒ B
- ☐ C
- ☒ D
- ☐ E
- ☐ No two sets return the same values.

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PROBLEM 2-4 (1/1 point)

Is the the answer to Problem 2-2 the same as the answer to Problem 2-3? If not, why are they different?

- ☐ They are the same.
- ☐ They are different because the `possible_mean` function adds up the wrong values.
- ☒ They are different because of the way Python 2.7 handles division of integers. ✓
- ☐ They are different because of floating point precision issues.

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