Untitled25

February 10, 2019

In [2]:
```
"""Problem Statement 1:
You survey households in your area to find the average rent they are paying. Find the
standard deviation from the following data:
$1550, $1700, $900, $850, $1000, $950."""

import numpy as np
print(np.std(np.array([1550,1700,900,850,1000, 950.])))
```

```
335.92740617910624
```

In [3]:
```
"""Problem Statement 2:
Find the variance for the following set of data representing trees in California (heig
feet):
3, 21, 98, 203, 17, 9"""

np.var([3, 21, 98, 203, 17, 9])
```

Out[3]: 5183.25

In [5]:
```
np.var([3, 21, 98, 203, 17, 9],ddof=1)
```

Out[5]: 6219.9

In [9]:
```
"""Problem Statement 3:
In a class on 100 students, 80 students passed in all subjects, 10 failed in one subje
failed in two subjects and 3 failed in three subjects. Find the probability distributi
the variable for number of subjects a student from the given class has failed in."""

#For a random student,

#The probability of failing in 0 subjects, P(X=0) =80/100= 0.8

#The probability of failing in 1 subjects, P(X=1) =10/100= 0.1

#The probability of failing in 2 subjects, P(X=2) =7/100= 0.07

#The probability of failing in 3 subjects, P(X=3) =3/100= 0.03
```

```
import pandas as pd

pdf=pd.DataFrame({"X":[0,1,2,3],"P(X)":[0.80,0.10,0.07,0.03]}).transpose()
pdf
```

Out[9]:

	0	1	2	3
X	0.0	1.0	2.00	3.00
P(X)	0.8	0.1	0.07	0.03