In [9]:
```
import numpy as np
import pandas as pd
import scipy
from scipy import stats
from scipy.stats import chi2_contingency
```

In [10]:
```
Data_set = pd.read_csv("BuyerRatio.csv")
```

In [11]:
```
Data_set.shape
```

Out[11]:
```
(2, 5)
```

In [12]:
```
Data_set.head()
```

Out[12]:

	Observed Values	East	West	North	South
0	Males	50	142	131	70
1	Females	435	1523	1356	750

In [22]:
```
Data_set1 = [[50,435], [142,1523], [131,1356],[70,750]]
```

In [23]:
```
_, p, dof, expected = chi2_contingency(Data_set1)
```

In [24]:
```
expected
```

Out[24]:
```
array([[  42.76531299,  442.23468701],
       [ 146.81287862, 1518.18712138],
       [ 131.11756787, 1355.88243213],
       [  72.30424052,  747.69575948]])
```

In [26]:
```
dof
```

Out[26]:
```
3
```

In [25]:
```
p
```

Out[25]:
```
0.6603094907091882
```