In [1]:

```python
import numpy as np
import pandas as pd
import scipy.stats as st
```

In [2]:

```python
data = pd.read_csv('Cauchy.csv', header=None).as_matrix()
data = np.array(data.reshape(1, len(data))[0])
```

Функция правдоподобия:

In [4]:

```python
dist = st.cauchy()
def prob_funk(sample, param):
    return np.sum(np.log(dist.pdf(sample - param)))
```

Оценка для половины выборки:

In [5]:

```python
grid = np.arange(-1000, 1000, 0.01)
estimation1 = grid[np.argmax(np.array([prob_funk(data[:len(data/2)], x_est) for
x_est in grid]))]
print estimation1
```

964.009999998

Оценка для полной выборки:

In [6]:

```python
estimation2 = grid[np.argmax(np.array([prob_funk(data[:len(data/2)], x_est) for
x_est in grid]))]
print estimation2
```

964.009999998

In [ ]: