Additional Functions

function	Value
• count()	**sum(1 for i in list_of_pairs)**
• sumx(), sumy()	**sum([item[0] for item in list_of_pairs])**
• sumx2()	sum of **item[0]**2**
• sumy2()	sum of **item[1]**2**
• sumxy()	sum of products

Correlation

$$r_{xy} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n \sum x_i^2 - \left(\sum x_i\right)^2}\sqrt{n \sum y_i^2 - \left(\sum y_i\right)^2}}$$

- We have **count(data)**, **sumxy(data)**, **sumx(data)**, **sumy(data)**, **sumx2(data)**, and **sumy2(data)**

  - Shouldn't be too hard to compute this

  - Translate $\sum x_i$ to **sumx()**

```
def count(list_of_pairs):
    return sum(1 for i in list_of_pairs)
```