In [26]:
```
import numpy as np
import pandas as pd

shops = pd.read_csv('2019 Winter Data Science Intern Challenge Data Set - Sheet1.csv')
shops['order_amount'] = shops['order_amount']/shops['total_items']

aovAllShops = shops.groupby('shop_id')['order_amount'].sum()/shops.groupby('shop_id')['order_id'].count()
np.average(aovAllShops)
```

Out[26]: 407.99

Q1.A.
$3145.13 seems to be the result of doing average without taking number of items for each order amount. Just dividing order by number of items and using those AOV calculations results in actual and reasonable value.

Q1.B.
I would report average AOV among all the stores.

Q1.C.
Final average AOV among all the stores is $407.99

Q2.A

```
SELECT COUNT(OrderID) FROM Orders
WHERE ShipperID = 1;

    --result -> 54
```

Q2.B

```
SELECT Orders.EmployeeID, Employees.LastName, COUNT(Orders.OrderID)
FROM Orders
INNER JOIN Employees ON Orders.EmployeeID = Employees.EmployeeID
GROUP BY Orders.EmployeeID, Employees.LastName ORDER BY COUNT(Orders.OrderID) DESC;

    --result -> Peacock
```

Q2.C

```
SELECT Products.ProductName, OrderDetails.ProductID, COUNT(Customers.CustomerID)
FROM (((Orders
INNER JOIN Customers ON Orders.CustomerID = Customers.CustomerID)
INNER JOIN OrderDetails ON OrderDetails.OrderID = Orders.OrderID)
INNER JOIN Products ON Products.ProductID = OrderDetails.ProductID)
WHERE Customers.Country = 'Germany'
GROUP BY Products.ProductName, OrderDetails.ProductID ORDER BY COUNT(Customers.CustomerID)
DESC;

    --result -> Gorgonzola Telino
```

In [ ]: