

Question 1:

- a) By using the AOV for our analysis we are including outliers in our calculation. By using the .describe() function I found that the max order_amount is \$704,000 and another shoe is also priced at \$154350. This is an outrageous price and is clearly affecting the mean or AOV. Also, something to keep in mind is that not every order has just one item. When looking at the results from the describe method I found that one order actually had 2000 total items and that the median for total_items was 2. A better way to evaluate this data would be to use the median which gives us a value of \$284 which seems like a much more reasonable order price.
- b) I would report the median for this dataset.
- c) The value of using the median is that it uses the number in the middle of all the values rather than taking every data point in the list into account. Therefore, shops that sell shoes for outrageous prices like \$704,000 and \$154,350 won't be taken into account.

Question 2:

- a) 54 orders were shipped by Speed Express in total.

```
SELECT count(*)  
FROM Orders  
LEFT JOIN Shippers on  
Orders.ShipperID = Shippers.ShipperID  
where ShipperName = 'Speedy Express';
```

- b) Peacock is the last name of the employee with the most orders.

```
SELECT LastName, t1.*  
FROM Employees  
INNER JOIN (SELECT top 1 EmployeeID, count(EmployeeID) as NumberOfOrders  
FROM Orders  
group by EmployeeID  
order by count(EmployeeID) desc) as t1  
on Employees.EmployeeID = t1.EmployeeID
```

- c) Boston Crab Meat was ordered the most by customers in Germany with a value of 160.

```
SELECT top 1 Products.ProductName, sum(OrderDetails.Quantity) as AmountOrdered  
from OrderDetails  
INNER JOIN Products on  
OrderDetails.ProductID = Products.ProductID  
where OrderID in (SELECT OrderID FROM Orders  
where CustomerID in (SELECT CustomerID FROM Customers  
where Country = 'Germany'))  
group by ProductName  
order by sum(OrderDetails.Quantity) desc;
```

