

**Question 1A:**

Naively calculating an AOV of \$3145 doesn't take into account the fact that multiple items can be bought in the same order. A more accurate AOV would be to divide the total order amount by the total item count instead of the total order count. If I had more information about the dataset I would also suggest taking cost of goods sold into account, as a higher revenue item may not necessarily have a higher profit.

**Question 1B:**

The metric that I would report on would be average revenue per item sold.

**Question 1C:**

The value of the metric is approximately \$357.92 revenue per item sold.

**Question 2A:**

```
SELECT ShipperID FROM Shippers WHERE ShipperName= 'Speedy Express';  
select count(case when ShipperID = 1 then 1 else null end) as ShipCount  
from Orders;
```

By running the first command we find that the Speedy Express has the ID of 1. Then, we can run the second command to get the final answer of 54 orders shipped by Speedy Express in total.

**Question 2B:**

```
SELECT EmployeeID, COUNT(EmployeeID) AS occurrence  
FROM Orders  
GROUP BY EmployeeID  
ORDER BY occurrence DESC  
LIMIT 1;  
SELECT LastName FROM [Employees] WHERE (EmployeeID = 4);
```

By running the first command we can find that Employee #4 had the most orders at 40 orders. By running the second command we can find the last name of the employee as **Peacock**.

### Question 2C:

```
SELECT ProductID, count(ProductID) as numproducts
FROM OrderDetails where OrderID in (Select OrderID from Orders
WHERE CustomerID in (SELECT CustomerID FROM Customers where
Country = 'Germany'))
Group by ProductID
order by numproducts desc
limit 1;
SELECT ProductName FROM [Products] Where ProductID=31;
```

By running the first command we find that the most popular product is product **#31** with **5** products sold. We can break the first command down into the following steps:

1. `SELECT CustomerID FROM Customers where Country = 'Germany'` selects the CustomerIDs of the customers whose country is Germany.
2. `Select OrderID from Orders WHERE CustomerID in (...)` finds the OrderIDs in the Orders table where the associated CustomerID is in the query outlined in step 1.
3. `SELECT ProductID, count(ProductID) as numproducts FROM OrderDetails where OrderID in (...)` selects and counts ProductID as numproducts in the OrderDetails table where the associated OrderID is in the query outlined in step 2.
4. `Group by ProductID order by numproducts desc limit 1;` arranges and filters the results obtained in step 3 to display the ProductID of the most popular product.

Running the second command gives us the name of the product, **Gorgonzola Telino**.