b)  
 i) Assume the ShipDate is uniformly distributed over its range, and the range is from :today to :today-999, then

ii) Assume that ShipDates are uniformly distributed on all customers, then

c)

Since no indexes available, for join operation, a block-based nested loop join should be applied. We can push the selection directly to the Order, which means the equivalent query should be . For selection part, linear search is required since no index available.

I/O cost:

For :

Assume the ShipDate is uniformly distributed over its range, and the range is from :today to :today-999

Then

For block-based nested loop join part, the cost is