SQL COMMANDS AND OUTPUTS

```
select a.SeasonalityTag,
round(sum(b.linecost),2) as Total_cost,
round(sum(b.linerevenue),2) as Total_Revenue,
round(sum(b.LineRevenue-b.LineCost),2) as Profit
from product a join orderline b
on a.productid=b.productid group by SeasonalityTag;
```

	SeasonalityTag	Total_cost	Total_Revenue	Profit
1	Giftable	17357951.84	23210859.48	5852907.64
2	Evergreen	8507673.26	11360727.41	2853054.15
3	Winter	7673878.99	10266182.41	2592303.42

- Negative profits by top 10 products

```
select top 10
b.subcategory as Item,
round(sum(a.LineRevenue-a.linecost),2) as revenue
from orderline a join Product b
on a.productid=b.ProductID
group by a.productid,b.Subcategory order by revenue;
```

118 %

Results | Messages

	Item	revenue
1	Sweaters	-282.21
2	Outerwear	-229.93
3	Necklace	-202.22
4	Gaming	-186.7
5	Earrings	-162.13
6	Earrings	-144.8
7	Socks	-132.81
8	Sweaters	-128.87
9	Kitchen	-124.14
10	Cycling	-119.98

- Top 10 revenue products

```
select top 10
b.subcategory as Item,
round(sum(a.LineRevenue-a.linecost),2) as revenue
from orderline a join Product b
on a.productid=b.ProductID
group by a.productid,b.Subcategory order by revenue desc;
```

118 %

Results | Messages

	Item	revenue
1	Outdoor	14267.12
2	Bracelet	12831.1
3	Boots	12513.92
4	Fragrance	12287.54
5	Bracelet	12215.54
6	Bracelet	12103.59
7	Bracelet	11948.13
8	Outerwear	11744.54
9	Headphones	11676.65
10	Gaming	11639.78

- Actual revenue of each vendor

```
with cte as
(select a.productid,a.vendor,
round(sum(a.msrp-a.standardcost),2) as revenue,count(b.productid*b.qty) as volume
from product a join orderline b on a.productid=b.productid
group by a.vendor,a.ProductID)
select vendor,sum(revenue*volume) as actual_revenue,sum(volume) as total_vol from cte
group by vendor order by actual_revenue desc;
```

118 %

Results | Messages

	vendor	actual_revenue	total_vol
1	VendorD	114854169.63	36895
2	VendorB	114289712.86	36505
3	VendorA	113090736.27	36940
4	VendorC	112129619.21	36523
5	VendorE	108481808.42	35275

- Total rev and total orders by each campaign,

```
select a.campaigntype,sum(a.plannedbudget) as budget,count(b.orderid) as toatal_orders,
round(sum(c.linecost),2) as Total_cost,
round(sum(c.linerevenue),2) as Total_Revenue,
ROUND(sum(c.LineRevenue-c.LineCost),2) as Profit
from promotion a join orderheader b on a.PromotionID=b.promotionid
join OrderLine c on b.orderid=c.OrderID
group by a.CampaignType;
```

118 %

Results | Messages

	campaigntype	budget	toatal_orders	Total_cost	Total_Revenue	Profit
1	CM	9440068484.98	16700	3078264.55	4166648.33	1088383.78
2	Holiday	47160339015.58	77847	14322739.69	18485572.67	4162832.98
3	Clearance	7110536544.44	16587	3105695.61	3939365.83	833670.22
4	BF	29823396577.87	56402	10342770.8	13912144.14	3569373.34

- Total budget and total lift per campaign

```
select campaigntype,count(name) as promotions,round(sum(PlannedLift),2) AS lift,sum(plannedbudget) as budget
from promotion group by CampaignType;
```

118 %

Results | Messages

	campaigntype	promotions	lift	budget
1	BF	20	505.8	10612738.15
2	Clearance	6	216.3	2577172.85
3	CM	6	173	3339909.44
4	Holiday	28	890.4	17009405.49

11. Do **Percent, Price, or BOGO** promotions generate better profitability?

```
select a.DiscountType,count(b.orderid) as toatal_orders,
round(sum(c.linecost),2) as Total_cost,
round(sum(c.linerevenue),2) as Total_Revenue,
ROUND(sum(c.LineRevenue-c.LineCost),2) as Profit
from promotion a join orderheader b on a.PromotionID=b.promotionid
join OrderLine c on b.orderid=c.OrderID
group by a.DiscountType order by Profit desc;
```

118 %

Results | Messages

	DiscountType	toatal_orders	Total_cost	Total_Revenue	Profit
1	Percent	94813	17433511.97	22486684.16	5053172.19
2	Price	39143	7214113.4	11206128.96	3992015.56
3	BOGO	33580	6201845.28	6810917.85	609072.57

- Campaigns for different type of customers,

```sql
select targetsegment,
count(campaigntype) as campaigns,
round(sum(plannedlift),2) as lift,
sum(plannedbudget) as budget
from promotion group by targetsegment;
```

118 %

Results | Messages

	targetsegment	campaigns	lift	budget
1	All	17	470.5	8917874.21
2	Loyalty	14	448.7	6514622.10
3	New Customers	13	358.5	8292077.01
4	Returning Customers	16	507.8	9814652.61

- Avg returns

```sql
SELECT
    cast(round((COUNT(DISTINCT b.OrderLineID) * 1.0
    / COUNT(DISTINCT a.OrderLineID))*100,2) as decimal(10,2)) AS Avg_Returns
FROM orderline a
LEFT JOIN Returns b
    ON a.OrderLineID = b.OrderLineID;
```

118 %

Results | Messages

	Avg_Returns
1	11.92

- Avg return rate per category

```sql
select b.seasonalitytag,
cast(round(count(distinct c.orderlineId)*100.0/count(distinct a.orderlineid),2) as decimal(10,2)) as total_returns
from orderline a
JOIN product b on a.productid=b.productid
left join returns c on a.orderlineid=c.orderlineid
group by b.SeasonalityTag
```

118 %

Results | Messages

	seasonalitytag	total_returns
1	Giftable	12.17
2	Evergreen	11.60
3	Winter	11.73

```sql
select b.Category,
cast(round(count(distinct c.orderlineId)*100.0/count(distinct a.orderlineid),2) as decimal(10,2)) as total_returns
from orderline a
JOIN product b on a.productid=b.productid
left join returns c on a.orderlineid=c.orderlineid
group by b.Category order by total_returns desc
```

118 %

Results | Messages

	Category	total_returns
1	Footwear	12.37
2	Home	12.09
3	Books	12.03
4	Toys	12.00
5	Grocery	11.99
6	Electronics	11.91
7	Sports	11.80
8	Beauty	11.75
9	Jewelry	11.74
10	Apparel	11.52

- Avg of write-offs and returns in the total returns

```sql
with cte as
(select count(disposition) as total_count,
count(case when disposition='write-off' then 1 end) as writeoffs,
count(case when disposition='resell' then 1 end) as resell
from returns)
select sum(total_count) as returns,
cast(round(sum(writeoffs*1.0/total_count)*100,2) as decimal(10,2)) as writeoff_returns,
cast(round(sum(resell*1.0/total_count)*100,2) as decimal(10,2)) as resell_returns
from cte
```

118 %

Results | Messages

	returns	writeoff_returns	resell_returns
1	21709	39.59	60.41

```sql
select count(*) as total_returns,
cast(round
(count((case when disposition='write-off' then 1 end))*100.0/count(*)
,2) as decimal(10,2)) as avg_writeoff,
cast(round(
count((case when disposition='resell' then 1 end))*100.0/count(*)
,2) as decimal(10,2)) as avg_resell
from Returns
```

118 %

Results | Messages

	total_returns	avg_writeoff	avg_resell
1	21709	39.59	60.41

- Total refunds and write-offs losses based on reason

```
select reasoncode, count(reasoncode) as Total,
round(sum(refund),2) as refund
from Returns where Disposition='Write-off'
group by ReasonCode order by total desc
```

118 %

Results | Messages

	reasoncode	Total	refund
1	Wrong Size	2616	612445.26
2	Changed Mind	2107	520709.76
3	Defective	1674	384822.97
4	Late Delivery	1308	311817.96
5	Other	889	202085.68

- Category wise total refund

```
select b.seasonalitytag,
round(sum(c.Refund),2) as total_refund
from orderline a
JOIN product b on a.productid=b.productid
left join returns c on a.orderlineid=c.orderlineid
where c.Disposition='write-off'
group by b.SeasonalityTag
```

118 %

Results | Messages

	seasonalitytag	total_refund
1	Giftable	1070324.75
2	Evergreen	506655.02
3	Winter	454901.86

- Total orders and total delivery costs and on time and late delivery percentage

```
select count(*) as total_orders,
round(sum(shipcost),2) as delivery_cost,
cast(round
(count(case when deliverystatus='ontime' then 1 end)*100.0/count(*)
,2) as decimal(10,2))as ontime_deliveries,
cast(round
(count(case when deliverystatus='late' then 1 end)*100.0/count(*)
,2)as decimal(10,2)) as late_deliveries
from Fullfilment
```

118 %

Results | Messages

	total_orders	delivery_cost	ontime_deliveries	late_deliveries
1	45000	500095.04	31.35	68.65

- Carriers and its total orders and avg order cost

```
select carrier,
count(*) as total_orders,
count(case when deliverystatus='ontime' then 1 end) as ontime_deliveries,
count(case when deliverystatus='late' then 1 end) as late_deliveries,
round(sum(shipcost),2) as total_cost,
round(avg(shipcost),2) as avg_cost
from Fullfilment
group by carrier order by total_orders
```

118 %

Results | Messages | Client Statistics

	carrier	total_orders	ontime_deliveries	late_deliveries	total_cost	avg_cost
1	USPS	11002	3513	7489	122576.38	11.14
2	FedEx	11312	3562	7750	125361.92	11.08
3	DHL	11340	3531	7809	126060.86	11.12
4	UPS	11346	3502	7844	126095.88	11.11

- Returns due to late orders per carrier and total refund

```
select
b.carrier,
count(case when b.deliverystatus='late' then 1 end) as late_deliveries,
count(case when c.ReasonCode='late delivery' then 1 end) as total_returns,
round(sum(c.refund),2) as total_refund
from orderline a join fullfilment b
on a.orderid=b.orderid
left join returns c
on a.orderlineid=c.orderlineid
group by b.Carrier order by total_refund desc;
```

118 %

Results | Messages | Client Statistics

	carrier	late_deliveries	total_returns	total_refund
1	DHL	31822	823	1301216.93
2	UPS	31665	848	1290468.89
3	FedEx	31458	804	1281476.65
4	USPS	30274	814	1248889.16