

8WEEKSQLCHALLENGE.COM

# CASE STUDY #7



## BALANCED TREE

CLOTHING COMPANY

DATAWITHDANNY.COM

dataset link available on this site :- <https://8weeksqlchallenge.com/case-study-7/>

```
-- select * from product_details
-- select * from product_hierarchy
-- select * from product_prices
-- select * from sales
```

1. What was the total quantity sold for all products?

```
select prod_id,sum(qty) total_quantity
from sales
group by prod_id
```

2. What is the total generated revenue for all products before discounts?

```
select
prod_id,
sum(qty * price) total_revenue
from sales
group by prod_id
```

3. What was the total discount amount for all products?

```
select
prod_id,
sum(qty * price + discount) total_discount_amount
from sales
group by prod_id
```

4. How many unique transactions were there?

```
select count(distinct(txn_id)) as unique_count  
from sales
```

5. What is the average unique products purchased in each transaction?

```
with mycte as  
(  
  select txn_id, count(prod_id) as prod_count  
  from sales  
  group by txn_id  
  order by prod_count  
)  
select round(avg(prod_count),1) avg_tran_per_prod  
from mycte
```

6. What are the 25th, 50th and 75th percentile values for the revenue per transaction?

```
with mycte as  
(  
  select txn_id, sum(qty * price) as total_revenue  
  from sales  
  group by txn_id  
)  
select  
  percentile_cont(0.25) within group (order by total_revenue) as "25th_percentile",  
  percentile_cont(0.50) within group (order by total_revenue) as "50th_percentile",  
  percentile_cont(0.75) within group (order by total_revenue) as "75th_percentile"
```

from mycte

7. What is the average discount value per transaction?

```
select avg(discount) as avg_discount_per_tran  
from sales  
order by avg_discount_per_tran
```

8. What is the percentage split of all transactions for members vs non-members?

```
select  
sum(case when member = 'true' then 1 else 0 end)*100/(select count(member) from sales) as  
percentage_of_member,  
sum(case when member = 'false' then 1 else 0 end)*100/(select count(member) from sales) as  
percentage_of_non_member  
from sales
```

9. What is the average revenue for member transactions and non-member transactions?

```
select member,round(avg(qty * price),1) as avg_rev_member_and_non_member  
from sales  
group by member
```

Product Analysis

10. What are the top 3 products by total revenue before discount?

```
select prod_id,sum(qty * price) as revenue  
from sales  
group by prod_id  
order by revenue desc  
limit 3
```

11. What is the total quantity, revenue and discount for each segment?

```
select pd.segment_name,sum(s.qty) total_qty,sum(s.qty * s.price) total_revenue,sum(s.discount)
total_discount
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.segment_name
```

12. What is the top selling product for each segment?

```
select pd.segment_name,sum(s.qty * s.price) total_revenue
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.segment_name
order by total_revenue desc
limit 1
```

13. What is the total quantity, revenue and discount for each category?

```
select pd.category_name,sum(s.qty) total_qty,sum(s.qty * s.price) total_revenue,sum(s.discount)
total_discount
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.category_name
```

14. What is the top selling product for each category?

```
select pd.category_name,sum(s.qty * s.price) total_revenue
```

```
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.category_name
order by total_revenue desc
limit 1
```

15. What is the percentage split of revenue by product for each segment?

```
select
pd.segment_name,
count(case
    when pd.segment_name = 'Shirt' then 1
    when pd.segment_name = 'Jacket' then 1
    when pd.segment_name = 'Jeans' then 1
    when pd.segment_name = 'Socks' then 1
    else 0
end) * 100/
(select count(segment_name)
```

```
from sales as s
join product_details as pd
on s.price = pd.price) as percentage_divide
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.segment_name
```

16. What is the percentage split of revenue by segment for each category?

```
select
pd.category_name,
```

```

count(case
    when pd.category_name = 'mens' then 1 else 0
end) * 100/
(select count(pd.category_name)
from sales as s
join product_details as pd
on s.price = pd.price) as percentage_divide
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.category_name

```

17. What is the percentage split of total revenue by category?

```

select
pd.category_name,
sum(s.qty * s.price)*100/(select sum(qty * price) from sales) as category_percentage
from sales as s
join product_details as pd
on s.price = pd.price
group by pd.category_name

```

18. What is the most common combination of at least 1 quantity of any 3 products in a 1 single transaction?

```

with mycte as
(
select txn_id,qty,count(prod_id) as product_count
from sales
group by txn_id,qty
)

```

```
select txn_id,qty,product_count
from mycte
where qty >= 1 and product_count = 3
```