MYSQL ASSIGNMENT 4

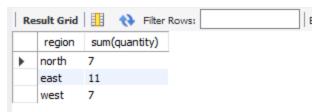**Table:** Sales

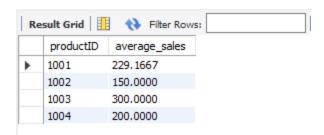| SaleID	ProductID	CustomerID	SaleDate	Quantity	UnitPrice	Region
1	101	1001	2024-01-05	5	200	North
2	102	1002	2024-01-10	10	150	East
3	103	1003	2024-02-15	2	300	North
4	104	1001	2024-02-20	7	250	West
5	101	1004	2024-03-05	1	200	East

1. Write a query to calculate the total sales (Quantity * UnitPrice) for each product.
select productID , unitprice*quantity as total_sales from sales;

productID	total_sales
1001	1000
1002	1500
1003	600
1001	1750
1004	200

2. Write a query to find the total number of products sold in each region.
select region, sum(quantity) from sales group by region;

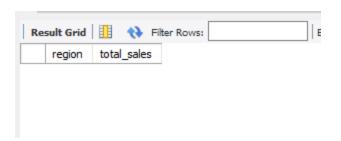| region	sum(quantity)
north	7
east	11
west	7

3. Write a query to get the average sales amount per product.
select productID, (sum(quantity*unitprice)/sum(quantity)) as average_sales from sales group by productID ;

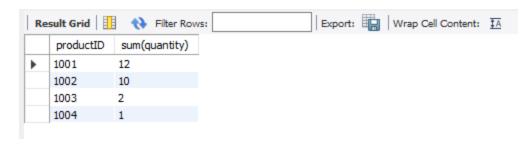| productID	average_sales
1001	229.1667
1002	150.0000
1003	300.0000
1004	200.0000

4. Find the regions where total sales are more than 3000.

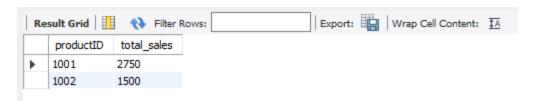**select region,sum(quantity*unitprice) as total_sales from sales group by region having total_sales >3000;**

region	total_sales

5. Write a query to get the maximum quantity sold for each product.
select productID , sum(quantity) from sales group by productID;

productID	sum(quantity)
1001	12
1002	10
1003	2
1004	1

6. Write a query to calculate the average quantity of products sold per region.
select region, avg(quantity) as "average quantity" from sales group by region;

region	average quantity
north	3.5000
east	5.5000
west	7.0000

7. Find the product IDs that have generated a total sales amount of more than 1000.
select productID, sum(quantity*unitprice) as total_sales from sales group by productID having total_sales > 1000;

productID	total_sales
1001	2750
1002	1500

8. Write a query to get the total number of sales (rows) made for each customer.
select customerID, sum(quantity) as "total number of sales" from sales group by customerID;

customerID	total number of sales
101	6
102	10
103	2
104	7

9. Find the products for which the average quantity sold is less than 5.

select productID, avg(quantity) as average_quantity from sales group by productID having average_quantity < 5;

productID	average_quantity
1003	2.0000
1004	1.0000

10. Write a query to find the sum of total sales for each customer in each region.

select customerID,region, sum(quantity*unitprice) as total_sales from sales group by customerID,region order by customerID,region;

customerID	region	total_sales
101	east	200
101	north	1000
102	east	1500
103	north	600
104	west	1750

11. Write a query to calculate the total sales for each month.

select month(saledate) as month, sum(quantity*unitprice) as total_sales from sales group by month;

month	total_sales
1	2500
2	2350
3	200

12. Find the regions where the average unit price is more than 200.

select region, avg(unitprice) as average_unit_price from sales group by region having average_unit_price >200;

region	average_unit_price
north	250.0000
west	250.0000

13. Write a query to get the minimum and maximum quantity sold per region.

select region, max(quantity) as maximum_quantity, min(quantity) as minimum_quantity from sales group by region;

region	maximum_quantity	minimum_quantity
north	5	2
east	10	1
west	7	7

14. Find the customers who have made more than 2 purchases.

select customerID, sum(quantity) as purchase from sales group by customerID having purchase > 2;

customerID	purchase
101	6
102	10
104	7

15. Write a query to find the total sales for each product and filter only those products where the total sales exceed 1500.

select productID , sum(quantity*unitprice) as total_sales from sales group by productID having total_sales >1500;

productID	total_sales
1001	2750