

--- Geo & Salesperson-related Questions:

1. What is the total sales amount per region?

```
SELECT g.Region, SUM(s.Amount) AS total_sales_amount
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY g.Region;
```

2. How many sales were made by each salesperson in a specific region?

```
SELECT p.Salesperson, COUNT(s.SPID) AS sales_count
FROM sales s
JOIN people p ON s.SPID = p.SPID
JOIN geo g ON s.GeoID = g.GeoID
WHERE g.Region = "India"
GROUP BY p.Salesperson;
```

3. Which region has the highest number of customers?

```
SELECT g.Region, SUM(s.Customers) AS total_customers
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY g.Region
ORDER BY total_customers DESC
```

4. What is the average number of boxes sold by each salesperson per region?

```
SELECT p.Salesperson, g.Region, AVG(s.Boxes) AS average_boxes_sold
FROM sales s
JOIN people p ON s.SPID = p.SPID
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY p.Salesperson, g.Region;
```

5. How many unique locations are there per region?

```
SELECT g.Region, COUNT(DISTINCT p.Location) AS unique_locations_count
FROM people p
JOIN geo g ON p.Location = g.GeoID -- Assuming Location refers to GeoID in geo table
```

GROUP BY g.Region;

6. Which region generates the highest revenue?

```
SELECT g.Region, SUM(s.Amount) AS total_revenue
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY g.Region
ORDER BY total_revenue DESC;
```

7. What is the most successful salesperson in terms of total sales amount per region?

```
SELECT p.Salesperson, g.Region, SUM(s.Amount) AS total_sales_amount
FROM sales s
JOIN people p ON s.SPID = p.SPID
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY p.Salesperson, g.Region
ORDER BY total_sales_amount DESC;
```

--- Product-related Questions:

8. What is the total revenue generated by each product category?

```
SELECT p.Category, SUM(s.Amount) AS total_revenue
FROM sales s
JOIN products p ON s.PID = p.PID
GROUP BY p.Category;
```

9. What is the most sold product in each region?

```
SELECT g.Region, p.Product, SUM(s.Boxes) AS total_boxes_sold
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
JOIN products p ON s.PID = p.PID
GROUP BY g.Region, p.Product
ORDER BY total_boxes_sold DESC;
```

10. Which product category brings in the most revenue?

```
SELECT p.Category, SUM(s.Amount) AS total_revenue
```

```
FROM sales s
JOIN products p ON s.PID = p.PID
GROUP BY p.Category
ORDER BY total_revenue DESC
```

11. What is the average number of boxes sold per product category?

```
SELECT p.Category, AVG(s.Boxes) AS average_boxes_sold
FROM sales s
JOIN products p ON s.PID = p.PID
GROUP BY p.Category;
```

12. What is the best-selling product size?

```
SELECT p.Size, SUM(s.Boxes) AS total_boxes_sold
FROM sales s
JOIN products p ON s.PID = p.PID
GROUP BY p.Size
ORDER BY total_boxes_sold DESC
```

13. Which product has the highest sales revenue?

```
SELECT p.Product, SUM(s.Amount) AS total_revenue
FROM sales s
JOIN products p ON s.PID = p.PID
GROUP BY p.Product
ORDER BY total_revenue DESC
```

14. What is the total cost of products sold by each salesperson?

```
SELECT p.Salesperson, SUM(s.Boxes * pr.Cost_per_box) AS total_cost_of_products_sold
FROM sales s
JOIN people p ON s.SPID = p.SPID
JOIN products pr ON s.PID = pr.PID
GROUP BY p.Salesperson;
```

15. What is the profit margin of each product based on its sales and cost per box?

```
SELECT pr.Product,
       SUM(s.Amount) AS total_sales,
       SUM(s.Boxes * pr.Cost_per_box) AS total_cost,
```

```

        (SUM(s.Amount) - SUM(s.Boxes * pr.Cost_per_box)) / SUM(s.Amount) * 100 AS
profit_margin_percentage
FROM sales s
JOIN products pr ON s.PID = pr.PID
GROUP BY pr.Product;

```

--- Sales-related Questions:

16. What is the total sales amount and number of boxes sold per salesperson?

```

SELECT p.Salesperson,
       SUM(s.Amount) AS total_sales_amount,
       SUM(s.Boxes) AS total_boxes_sold
FROM sales s
JOIN people p ON s.SPID = p.SPID
GROUP BY p.Salesperson;

```

17. What is the average sales amount per customer per salesperson?

```

SELECT p.Salesperson,
       AVG(s.Amount / s.Customers) AS average_sales_per_customer
FROM sales s
JOIN people p ON s.SPID = p.SPID
GROUP BY p.Salesperson;

```

18. Which sales date had the highest number of sales?

```

SELECT SaleDate, COUNT(*) AS total_sales
FROM sales
GROUP BY SaleDate
ORDER BY total_sales DESC

```

19. Which month/year had the highest revenue generated?

```

SELECT DATE_FORMAT(SaleDate, '%Y-%m') AS month_year,
       SUM(Amount) AS total_revenue
FROM sales
GROUP BY month_year
ORDER BY total_revenue DESC

```

20. What is the total number of boxes sold per region, salesperson, and product category?

```

SELECT g.Region,
       p.Salesperson,
       pr.Category,
       SUM(s.Boxes) AS total_boxes_sold
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
JOIN people p ON s.SPID = p.SPID
JOIN products pr ON s.PID = pr.PID
GROUP BY g.Region, p.Salesperson, pr.Category;

```

21. How does the number of customers change across different regions over time?

```

SELECT g.Region,
       DATE_FORMAT(SaleDate, '%Y-%m') AS month_year,
       SUM(s.Customers) AS total_customers
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY g.Region, month_year;

```

22. What is the total revenue generated by each salesperson?

```

SELECT p.Salesperson,
       SUM(s.Amount) AS total_revenue_generated
FROM sales s
JOIN people p ON s.SPID = p.SPID
GROUP BY p.Salesperson;

```

23. How many boxes of each product were sold by each salesperson?

```

SELECT p.Salesperson,
       pr.Product,
       SUM(s.Boxes) AS total_boxes_sold
FROM sales s
JOIN people p ON s.SPID = p.SPID
JOIN products pr ON s.PID = pr.PID
GROUP BY p.Salesperson, pr.Product;

```

--- Customer & Sales Insights:

24. Which salesperson handled the highest number of customers?

```

SELECT p.Salesperson,
       SUM(s.Customers) AS total_customers_handled
FROM sales s

```

```
JOIN people p ON s.SPID = p.SPID
GROUP BY p.Salesperson
ORDER BY total_customers_handled DESC
```

25. What is the average number of boxes sold per customer for each product category?

```
SELECT pr.Category,
       AVG(s.Boxes / s.Customers) AS average_boxes_per_customer
FROM sales s
JOIN products pr ON s.PID = pr.PID
WHERE s.Customers > 0 -- To avoid division by zero
GROUP BY pr.Category;
```

26. Which location has the highest customer count per salesperson?

```
SELECT p.Location,
       p.Salesperson,
       SUM(s.Customers) AS total_customers_handled
FROM sales s
JOIN people p ON s.SPID = p.SPID
GROUP BY p.Location, p.Salesperson
ORDER BY total_customers_handled DESC
```

27. What is the most popular product among customers in each region?

```
SELECT g.Region, pr.Product, SUM(s.Customers) AS total_customers
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
JOIN products pr ON s.PID = pr.PID
GROUP BY g.Region, pr.Product
ORDER BY total_customers DESC;
```

28. How many unique customers were served in each region?

```
SELECT g.Region,
       COUNT(DISTINCT s.Customers) AS unique_customers_served
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
GROUP BY g.Region;
```

29. Which region has the highest average sales amount per customer?

```

SELECT g.Region,
       AVG(s.Amount / NULLIF(s.Customers, 0)) AS average_sales_per_customer -- NULLIF to
avoid division by zero errors
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID
WHERE s.Customers > 0 -- To avoid division by zero errors in the average calculation
GROUP BY g.Region
ORDER BY average_sales_per_customer DESC

```

--- Time-based Sales Insights:

30. What is the total sales amount for each year, quarter, or month?

```

SELECT YEAR(s.SaleDate) AS year, QUARTER(s.SaleDate) AS quarter, MONTH(s.SaleDate)
AS month,
       SUM(s.Amount) AS total_sales
FROM sales s
GROUP BY year, quarter, month
ORDER BY year, quarter, month;

```

31. What are the busiest sales periods (e.g., months with the highest sales)?

```

SELECT MONTH(s.SaleDate) AS month, SUM(s.Amount) AS total_sales
FROM sales s
GROUP BY month
ORDER BY total_sales DESC

```

32. How do the sales numbers compare year over year or month over month?

```

SELECT DATE_FORMAT(SaleDate, '%Y-%m') AS month,
       SUM(Amount) AS total_sales_amount
FROM sales
GROUP BY month;

```

33. What is the total number of customers per quarter for each region?

```

SELECT g.Region,
       YEAR(s.SaleDate) AS year,
       QUARTER(s.SaleDate) AS quarter,
       SUM(s.Customers) AS total_customers
FROM sales s
JOIN geo g ON s.GeoID = g.GeoID

```

GROUP BY g.Region, year, quarter;

34. What is the revenue trend for different products over time?

```
SELECT pr.Product,  
       DATE_FORMAT(s.SaleDate, '%Y-%m') AS month_year,  
       SUM(s.Amount) AS total_revenue  
FROM sales s  
JOIN products pr ON s.PID = pr.PID  
GROUP BY pr.Product, month_year  
ORDER BY month_year;
```

35. How does the number of boxes sold vary by season or month?

```
SELECT MONTH(s.SaleDate) AS month, SUM(s.Boxes) AS total_boxes_sold  
FROM sales s  
GROUP BY month  
ORDER BY month;
```