**Q1. What is the estimated number of coffee consumers in each city, assuming that 25% of the total population consumes coffee?**

| city_name | coffee_consumers_by_city | city_rank |
|---|---|---|
| Delhi | 7.75 | 3 |
| Mumbai | 5.10 | 2 |
| Kolkata | 3.73 | 7 |
| Bangalore | 3.08 | 1 |
| Chennai | 2.78 | 6 |
| Hyderabad | 2.50 | 4 |
| Ahmedabad | 2.08 | 5 |
| Pune | 1.88 | 9 |
| Surat | 1.80 | 10 |
| Jaipur | 1.00 | 8 |
| Lucknow | 0.95 | 11 |
| Indore | 0.83 | 14 |
| Kanpur | 0.78 | 12 |
| Nagpur | 0.73 | 13 |

**Q2(A). How much revenue did coffee sales generate across all cities in Q4 2023?**

| total_revenue |
|---|
| 1963300 |

**Q2(B). Revenue from coffee sales in top 05 cities during Q4 2023**

| city_name | total_revenue |
|---|---|
| Pune | 434330 |
| Chennai | 302500 |
| Bangalore | 270780 |
| Jaipur | 248580 |
| Delhi | 238490 |

**Q3. What is the total number of units sold for each coffee product?**

| coffee_product | total_units_sold |
|---|---|
| Cold Brew Coffee Pack (6 Bottles) | 1326 |
| Ground Espresso Coffee (250g) | 1271 |
| Instant Coffee Powder (100g) | 1226 |
| Coffee Beans (500g) | 1218 |
| Tote Bag with Coffee Design | 776 |
| Vanilla Coffee Syrup (250ml) | 762 |
| Cold Brew Concentrate (500ml) | 312 |
| Organic Green Coffee Beans (500g) | 307 |
| Coffee Art Print | 296 |
| Flavored Coffee Pods (Pack of 10) | 295 |
| Coffee Drip Bags (10 Bags) | 289 |
| Insulated Travel Mug | 273 |
| Coffee Gift Hamper | 270 |
| Specialty Coffee Subscription | 258 |
| Customizable Coffee Coaster Set | 258 |
| French Press Coffee Set | 257 |
| Caramel Syrup (250ml) | 96 |
| Coffee Plant Kit (DIY) | 91 |
| Coffee Bean Storage Canister | 89 |
| Coffee Recipe Book | 88 |
| Mocha Flavored Coffee Mix (200g) | 86 |
| Personalized Coffee Spoon | 83 |
| Coffee-Themed T-Shirt | 82 |
| Reusable Coffee Cup (Eco-friendly) | 78 |
| Glass Coffee Jar (500ml) | 77 |

**Q4. What is the average sales amount per customer in each city?**

| city_name | total_revenue | no_of_orders_placed_customer | total_customers | avg_sales_per_customer |
|---|---|---|---|---|
| Pune | 1258290 | 2135 | 52 | 24197.88 |
| Chennai | 944120 | 1601 | 42 | 22479.05 |
| Bangalore | 860110 | 1464 | 39 | 22054.1 |
| Jaipur | 803450 | 1377 | 69 | 11644.2 |
| Delhi | 750420 | 1305 | 68 | 11035.59 |
| Mumbai | 235000 | 423 | 27 | 8703.7 |
| Kanpur | 213550 | 372 | 35 | 6101.43 |
| Surat | 176540 | 297 | 27 | 6538.52 |
| Kolkata | 171460 | 286 | 28 | 6123.57 |
| Nagpur | 140050 | 253 | 24 | 5835.42 |
| Indore | 138590 | 231 | 21 | 6599.52 |
| Ahmedabad | 137690 | 225 | 23 | 5986.52 |
| Hyderabad | 131520 | 221 | 21 | 6262.86 |
| Lucknow | 109400 | 198 | 21 | 5209.52 |

**Q5. Provide a list of cities along with their populations and estimated coffee consumers.**

| city_name | coffee_consumer_in_millions | unique_cx |
|-----------|------------------------------|-----------|
| Bangalore | 3.08 | 39 |
| Chennai | 2.78 | 42 |
| Pune | 1.88 | 52 |
| Jaipur | 1.00 | 69 |
| Delhi | 7.75 | 68 |
| Mumbai | 5.10 | 27 |
| Hyderabad | 2.50 | 21 |
| Ahmedabad | 2.08 | 23 |
| Kolkata | 3.73 | 28 |
| Surat | 1.80 | 27 |
| Lucknow | 0.95 | 21 |
| Kanpur | 0.78 | 35 |
| Nagpur | 0.73 | 24 |
| Indore | 0.83 | 21 |

**Q6. Identify the top 3 products by sales volume for every city.**

| city_name | product_name | total_orders | ranking |
|-----------|--------------|--------------|---------|
| Ahmedabad | Cold Brew Coffee Pack (6 Bottles) | 40 | 1 |
| Ahmedabad | Coffee Beans (500g) | 35 | 2 |
| Ahmedabad | Instant Coffee Powder (100g) | 26 | 3 |
| Bangalore | Cold Brew Coffee Pack (6 Bottles) | 197 | 1 |
| Bangalore | Ground Espresso Coffee (250g) | 167 | 2 |
| Bangalore | Instant Coffee Powder (100g) | 150 | 3 |
| Chennai | Cold Brew Coffee Pack (6 Bottles) | 192 | 1 |
| Chennai | Coffee Beans (500g) | 181 | 2 |
| Chennai | Instant Coffee Powder (100g) | 172 | 3 |
| Delhi | Ground Espresso Coffee (250g) | 183 | 1 |
| Delhi | Instant Coffee Powder (100g) | 170 | 2 |
| Delhi | Coffee Beans (500g) | 161 | 3 |
| Hyderabad | Instant Coffee Powder (100g) | 36 | 1 |
| Hyderabad | Cold Brew Coffee Pack (6 Bottles) | 28 | 2 |
| Hyderabad | Ground Espresso Coffee (250g) | 27 | 3 |
| Indore | Instant Coffee Powder (100g) | 33 | 1 |
| Indore | Ground Espresso Coffee (250g) | 26 | 2 |
| Indore | Cold Brew Coffee Pack (6 Bottles) | 26 | 2 |
| Indore | Coffee Beans (500g) | 23 | 3 |

**Q7. How many unique customers are there in each city who have purchased coffee products and not merchandise?**

| city_name | unique_customer |
|---|---|
| Ahmedabad | 23 |
| Bangalore | 39 |
| Chennai | 42 |
| Delhi | 68 |
| Hyderabad | 21 |
| Indore | 21 |
| Jaipur | 69 |
| Kanpur | 35 |
| Kolkata | 28 |
| Lucknow | 21 |
| Mumbai | 27 |
| Nagpur | 24 |
| Pune | 52 |
| Surat | 27 |

**Q8. Find each city and their average sale per customer and average rent per customer**

Comparing wrt average rent per customer

| city_name | estimated_rent | total_cx | avg_sale_pr_cx | avg_rent_per_cx |
|---|---|---|---|---|
| Mumbai | 31500 | 27 | 8703.7 | 1166.67 |
| Hyderabad | 22500 | 21 | 6262.86 | 1071.43 |
| Bangalore | 29700 | 39 | 22054.1 | 761.54 |
| Ahmedabad | 14400 | 23 | 5986.52 | 626.09 |
| Kolkata | 16200 | 28 | 6123.57 | 578.57 |
| Surat | 13500 | 27 | 6538.52 | 500 |
| Lucknow | 9000 | 21 | 5209.52 | 428.57 |
| Chennai | 17100 | 42 | 22479.05 | 407.14 |
| Delhi | 22500 | 68 | 11035.59 | 330.88 |
| Nagpur | 7200 | 24 | 5835.42 | 300 |
| Indore | 6300 | 21 | 6599.52 | 300 |
| Pune | 15300 | 52 | 24197.88 | 294.23 |
| Kanpur | 8100 | 35 | 6101.43 | 231.43 |
| Jaipur | 10800 | 69 | 11644.2 | 156.52 |

Comparing wrt average sales per customer

| city_name | estimated_rent | total_cx | avg_sale_pr_cx | avg_rent_per_cx |
|-----------|----------------|----------|----------------|-----------------|
| Pune | 15300 | 52 | 24197.88 | 294.23 |
| Chennai | 17100 | 42 | 22479.05 | 407.14 |
| Bangalore | 29700 | 39 | 22054.1 | 761.54 |
| Jaipur | 10800 | 69 | 11644.2 | 156.52 |
| Delhi | 22500 | 68 | 11035.59 | 330.88 |
| Mumbai | 31500 | 27 | 8703.7 | 1166.67 |
| Indore | 6300 | 21 | 6599.52 | 300 |
| Surat | 13500 | 27 | 6538.52 | 500 |
| Hyderabad | 22500 | 21 | 6262.86 | 1071.43 |
| Kolkata | 16200 | 28 | 6123.57 | 578.57 |
| Kanpur | 8100 | 35 | 6101.43 | 231.43 |
| Ahmedabad | 14400 | 23 | 5986.52 | 626.09 |
| Nagpur | 7200 | 24 | 5835.42 | 300 |
| Lucknow | 9000 | 21 | 5209.52 | 428.57 |

**Q9. Sales growth rate: Calculate the percentage growth (or decline) in sales over different time periods (monthly).**

(Month-Over-Month Growth Rate Calculated)

| city_name | month | year | current_month_sale | last_month_sale | mom_growth_rate |
|-----------|-------|------|--------------------|-----------------|-----------------|
| Ahmedabad | 2 | 2023 | 4100 | 3750 | 9.33 |
| Ahmedabad | 3 | 2023 | 3050 | 4100 | -25.61 |
| Ahmedabad | 4 | 2023 | 4040 | 3050 | 32.46 |
| Ahmedabad | 5 | 2023 | 2550 | 4040 | -36.88 |
| Ahmedabad | 6 | 2023 | 2900 | 2550 | 13.73 |
| Ahmedabad | 7 | 2023 | 2800 | 2900 | -3.45 |
| Ahmedabad | 8 | 2023 | 4300 | 2800 | 53.57 |
| Ahmedabad | 9 | 2023 | 8250 | 4300 | 91.86 |
| Ahmedabad | 10 | 2023 | 10950 | 8250 | 32.73 |
| Ahmedabad | 11 | 2023 | 21250 | 10950 | 94.06 |
| Ahmedabad | 12 | 2023 | 11360 | 21250 | -46.54 |
| Ahmedabad | 1 | 2024 | 12090 | 11360 | 6.43 |
| Ahmedabad | 2 | 2024 | 10900 | 12090 | -9.84 |
| Ahmedabad | 3 | 2024 | 14000 | 10900 | 28.44 |
| Ahmedabad | 4 | 2024 | 3950 | 14000 | -71.79 |
| Ahmedabad | 5 | 2024 | 5250 | 3950 | 32.91 |
| Ahmedabad | 6 | 2024 | 3300 | 5250 | -37.14 |
| Ahmedabad | 7 | 2024 | 2700 | 3300 | -18.18 |
| Ahmedabad | 8 | 2024 | 3550 | 2700 | 31.48 |
| Ahmedabad | 9 | 2024 | 2650 | 3550 | -25.35 |
| Bangalore | 2 | 2023 | 24750 | 36890 | -32.91 |
| Bangalore | 3 | 2023 | 26120 | 24750 | 5.54 |
| Bangalore | 4 | 2023 | 23520 | 26120 | -9.95 |
| Bangalore | 5 | 2023 | 37790 | 23520 | 60.67 |
| Bangalore | 6 | 2023 | 37790 | 37790 | 0 |

**Q10. Identify the top three cities with the highest sales and return their city name, total sales, total rent, total customers, and estimated coffee consumers**

| city_name | total_sales | total_rent | total_customers | estimated_coffee_consumer_in_millions | avg_sale_per_customer | avg_rent_per_customer |
|---|---|---|---|---|---|---|
| Pune | 1258290 | 15300 | 52 | 1.875 | 24197.88 | 294.23 |
| Chennai | 944120 | 17100 | 42 | 2.775 | 22479.05 | 407.14 |
| Bangalore | 860110 | 29700 | 39 | 3.075 | 22054.1 | 761.54 |
| Jaipur | 803450 | 10800 | 69 | 1.000 | 11644.2 | 156.52 |
| Delhi | 750420 | 22500 | 68 | 7.750 | 11035.59 | 330.88 |
| Mumbai | 235000 | 31500 | 27 | 5.100 | 8703.7 | 1166.67 |
| Kanpur | 213550 | 8100 | 35 | 0.775 | 6101.43 | 231.43 |
| Surat | 176540 | 13500 | 27 | 1.800 | 6538.52 | 500 |
| Kolkata | 171460 | 16200 | 28 | 3.725 | 6123.57 | 578.57 |
| Nagpur | 140050 | 7200 | 24 | 0.725 | 5835.42 | 300 |
| Indore | 138590 | 6300 | 21 | 0.825 | 6599.52 | 300 |
| Ahmedabad | 137690 | 14400 | 23 | 2.075 | 5986.52 | 626.09 |
| Hyderabad | 131520 | 22500 | 21 | 2.500 | 6262.86 | 1071.43 |
| Lucknow | 109400 | 9000 | 21 | 0.950 | 5209.52 | 428.57 |