1. Create a list in alphabetical order of names of Customers with more than $10 million in annual revenue

**ANS:**

SELECT

DISTINCT cust\_name

FROM Customer

WHERE annual\_revenue > 10000000

ORDER BY cust\_name

**Record Count: 78**

2. Give names , states and areas of cities with names ending with 'City' and with areas greater than 10 but less than 50. Use the Between operator.

**ANS:**

SELECT

DISTINCT city\_name,

state,

area

FROM City

WHERE area between 10 AND 50

AND city\_name LIKE '%city'

**Record Count: 10**

3. Give names and average monthly revenue of cust having annual rev exceeding $20million.name the column Average\_Monthly\_Revenue with a literal

**ANS:**

SELECT

DISTINCT cust\_name,

(annual\_revenue/12) AS Average\_Monthly\_Revenue

FROM Customer

WHERE annual\_revenue > 20000000

**Record Count: 59**

4. Give names and states of Customers that have a “D” as the third character in their names. (Note: SQL Server data is not case sensitive.)

**ANS:**

SELECT

DISTINCT cust\_name,

state

FROM Customer

WHERE cust\_name like '\_\_D%'

**Record Count: 3**

5. What are the truck ID’s of trucks that have carried small Shipments. Small Shipments are defined as those that weigh less than 800 pounds? (HInt: Avoid duplicates.)

**ANS:**

SELECT

DISTINCT truck\_id

FROM Shipment

WHERE weight < 800

**Record Count: 6**

6. Using IN operator, gie the city names and their populations of the cities in the database in north or south dakota,wyoming or montana

**ANS:**

SELECT

DISTINCT city\_name,

population

FROM City

WHERE state IN ('North Dakota',

'South Dakota',

'Wyoming',

'Montana')

**Record Count: 8**

7. Give ID'S names and states of cities with names starting with 'C'?

**ANS:**

SELECT

DISTINCT city\_id,

city\_name,

state

FROM City

WHERE city\_name like 'c%'

**Record Count: 51**

8. To what cities have Customers with revenue less than $5 million sent Shipments?

**ANS:**

SELECT

DISTINCT ci.city\_name

FROM City ci

JOIN Shipment s

ON s.city\_id = ci.city\_id

JOIN Customer c

ON c.cust\_id = s.cust\_id

WHERE c.annual\_revenue < 5000000

**Record Count: 91**

9. Give the names of Customers in the city of Cleveland that have had Shipments delivered by truck 3?

**ANS:**

SELECT

DISTINCT c.cust\_name

FROM Customer c

JOIN Shipment s

ON c.cust\_id = s.cust\_id

WHERE s.truck\_id = 3

AND c.City = 'cleveland'

**Record Count: 2**

10. Give the first and last names of drivers who have delivered Shipments weighing over 10000 pounds.

**ANS:**

SELECT

DISTINCT first\_name,

last\_name

FROM driver d

JOIN Shipment s

ON d.driver\_id = s.driver\_id

WHERE weight > 10000

**Record Count: 11**

11. What are the names and population of cities that have received Shipments weighing over 16000 pounds?

**ANS:**

SELECT

DISTINCT c.city\_name,

c.population

FROM City c

JOIN Shipment s

ON s.city\_id = c.city\_id

WHERE weight > 16000

**Record Count: 56**

12. What are the names of Customers who have sent Shipments to El Paso? (Hint: Avoid duplicates.)

**ANS:**

SELECT

DISTINCT cust\_name

FROM Customer

JOIN Shipment

ON Customer.cust\_id = Shipment.cust\_id

JOIN City

ON Shipment.city\_id = City.city\_id

WHERE city\_name = 'EL Paso'

**Record Count: 3**

13. List without duplication the model years of trucks that have delivered Shipments to New York.

**ANS:**

SELECT

DISTINCT model\_year

FROM Truck

JOIN Shipment

ON Truck.truck\_id = Shipment.truck\_id

JOIN City

ON Shipment.city\_id = City.city\_id

WHERE state = 'New York'

**Record Count: 6**

14. What are the names of Customers having over $10 million in annual revenue who have sent Shipments weighing less than 10,000 pounds?

**ANS:**

SELECT DISTINCT Cust\_name

FROM Customer

JOIN Shipment ON Customer.cust\_id = Shipment.cust\_id

WHERE annual\_revenue > 10000000 AND weight < 10000

**Record Count: 77**

15.List without duplication the makes of trucks that have delivered Shipments for Customers with less than $1 million in annual revenue.

**ANS:**

SELECT

DISTINCT t.make

FROM truck t JOIN Shipment s

ON t.truck\_id = s.truck\_id

JOIN Customer c ON c.cust\_id = s.cust\_id

WHERE c.annual\_revenue < 1000000

**Record Count: 1**

16.What is the total weight of Shipments that the Mack trucks have carried? (Truck make is 'Mack'.) Label the answer column as Total\_Loads.

**ANS:**

SELECT

SUM(s.weight) AS Total\_Loads

FROM truck t JOIN Shipment s

ON t.truck\_id = s.truck\_id

WHERE t.make = 'Mack'

**Record Count: 1**

17.What is the heaviest weight and the average weight of a Shipment? Name the columns with a literal of Heaviest\_Weight and Average\_Weight. Round the average weight answer to the nearest pound (i.e. no decimal places). (Hint: Embed the Avg function inside the Round function.)

**ANS:**

SELECT

MAX(weight) AS Heaviest\_Weight,

ROUND(AVG(weight),0) AS Average\_Weight

FROM Shipment

**Record Count: 1**

18.For each city (using city\_ID) that has received at least 6 Shipments, what is the average weight of a Shipment sent to that city? Round the average to 2 decimal places, and label the average weight column as Avg\_Weight. (Hint: Requires having.)

**ANS:**

SELECT

DISTINCT s.city\_id,

ROUND(AVG(s.weight),2) AS Avg\_Weight

FROM City c JOIN Shipment s

ON c.city\_id = s.city\_id

GROUP BY s.city\_id

HAVING count(s.ship\_id)>=6

**Record Count: 3**

19.How many Shipments has the Customer named 'Autoware Inc' sent? Label the answer column as Number\_of\_Shipments.

**ANS:**

SELECT

COUNT(s.ship\_id) AS Number\_of\_Shipments

FROM Shipment s JOIN Customer c

ON s.cust\_id=c.cust\_id

WHERE c.cust\_name = 'Autoware Inc'

**Record Count: 1**

20.How many different Customer types are there in the database? Label the column Number\_Types.

**ANS:**

SELECT COUNT(distinct cust\_type)

AS Number\_Types

FROM Customer

**Record Count: 1**

21.For each Customer ID, what is the average weight of a Shipment sent by the Customer with that ID? Round the average weights to 2 decimal places and label the column as Average\_Weight. (Hint: Requires a group by)

**ANS:**

SELECT c.cust\_id,

ROUND(AVG(s.weight),2) AS Average\_Weight

FROM Customer c JOIN Shipment s

ON c.cust\_id = s.cust\_id

GROUP BY c.cust\_id

**Record Count: 100**

22.For each city what is the maximum weight of a Shipment sent to that city? Use city\_ID to identify each city. Label the maximum weight column as Max\_Weight. (Hint: Use a group by.)

**ANS:**

SELECT c.city\_name,

MAX(s.weight) AS Max\_weight

FROM Shipment s JOIN City c

ON c.city\_id=s.city\_id

GROUP BY c.city\_name

**Record Count: 100**

23.What are the largest and the smallest populations of cities in the database? Label the first Largest\_Population and the second Smallest\_Population

**ANS:**

SELECT

MAX(population) AS Largest\_Population,

MIN(population) AS Smallest\_Population

FROM City

**Record Count: 1**

24.What is the average weight of a Shipment going to Atlanta with a shipping date in November or December? Name the column Average\_Weight. Round the answer to the nearest pound (zero decimal places). (Hint: Embed the Avg function inside the Round function.)

**ANS:**

SELECT

ROUND(AVG(s.weight),0) AS Average\_weight

FROM Shipment s JOIN City c

ON c.city\_id=s.city\_id

WHERE c.city\_name='Atlanta' AND MONTH(s.ship\_date) = 11 OR MONTH(s.ship\_date) = 12

**Record Count: 1**

25.For each city with a population over 1 million, what is the minimum weight of a Shipment sent to that city? Use city\_name to identify each city. Label the minimum weight column as Min\_Weight.

**ANS:**

SELECT c.city\_name,

MIN(s.weight) AS Min\_Weight

FROM Shipment s JOIN City c

ON s.city\_id = c.city\_id

WHERE c.population > 1000000

GROUP BY c.city\_name

**Record Count: 8**