

1. Total Number of Trips per Day:

```
SELECT datetime_dim.pick_day, COUNT(*) as total_trips
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.datetime_dim ON fact_table.datetime_id =
datetime_dim.datetime_id
GROUP BY datetime_dim.pick_day;
```

2. Average Trip Distance per Rate Code:

```
SELECT rate_code_dim.rate_code_name,
AVG(trip_distance_dim.trip_distance) as avg_distance
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.trip_distance_dim ON
fact_table.trip_distance_id = trip_distance_dim.trip_distance_id
JOIN `cab_trip_data_set`.rate_code_dim ON fact_table.rate_code_id =
rate_code_dim.rate_code_id
GROUP BY rate_code_dim.rate_code_name;
```

3. Total Fare Amount by Payment Type:

```
SELECT payment_type_dim.payment_type_name, SUM(fact_table.fare_amount)
as total_fare
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.payment_type_dim ON fact_table.payment_type_id
= payment_type_dim.payment_type_id
GROUP BY payment_type_dim.payment_type_name;
```

4. Number of Passengers Picked Up at Each Location per Hour:

```
SELECT pickup_location_dim.pickup_latitude,
pickup_location_dim.pickup_longitude,
datetime_dim.pick_hour,
COUNT(*) as passenger_count
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.pickup_location_dim ON
pickup_location_dim.pickup_location_id = fact_table.pickup_location_id
JOIN `cab_trip_data_set`.datetime_dim on datetime_dim.datetime_id
= fact_table.datetime_id
GROUP BY pickup_location_dim.pickup_latitude,
pickup_location_dim.pickup_longitude,
datetime_dim.pick_hour;
```

5. Total Tip Amount Collected Each hour:

```
SELECT datetime_dim.pick_hour,  
       SUM(fact_table.tip_amount) as total_tip_amount  
FROM   `cab_trip_data_set`.fact_table  
JOIN   `cab_trip_data_set`.datetime_dim ON fact_table.datetime_id=  
datetime_dim.datetime_id  
GROUP BY datetime_dim.pick_hour;
```

6. Most Popular Pickup Locations:

```
SELECT pickup_location_dim.pickup_latitude,  
pickup_location_dim.pickup_longitude, COUNT(*) as total_pickups  
FROM `cab_trip_data_set`.fact_table  
JOIN `cab_trip_data_set`.pickup_location_dim ON  
fact_table.pickup_location_id = pickup_location_dim.pickup_location_id  
GROUP BY pickup_location_dim.pickup_latitude,  
pickup_location_dim.pickup_longitude  
ORDER BY total_pickups DESC;
```

7. Most Frequent Travel Times:

```
SELECT datetime_dim.pick_hour, COUNT(*) as total_trips  
FROM `cab_trip_data_set`.fact_table  
JOIN `cab_trip_data_set`.datetime_dim ON fact_table.datetime_id =  
datetime_dim.datetime_id  
GROUP BY datetime_dim.pick_hour  
ORDER BY total_trips DESC;
```

8. Average Fare Amount by Rate Code:

```
SELECT rate_code_dim.rate_code_name, AVG(fact_table.fare_amount) as  
avg_fare  
FROM `cab_trip_data_set`.fact_table  
JOIN `cab_trip_data_set`.rate_code_dim ON fact_table.rate_code_id =  
rate_code_dim.rate_code_id  
GROUP BY rate_code_dim.rate_code_name;
```

9. Total Number of Trips by Payment Type:

```
SELECT payment_type_dim.payment_type_name, COUNT(*) as total_trips
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.payment_type_dim ON fact_table.payment_type_id
= payment_type_dim.payment_type_id
GROUP BY payment_type_dim.payment_type_name;
```

10. Average Number of Passengers per Trip:

```
SELECT ROUND(AVG(passenger_count_dim.passenger_count)) as
avg_passengers
FROM `cab_trip_data_set`.fact_table
JOIN `cab_trip_data_set`.passenger_count_dim ON
fact_table.passenger_count_id = passenger_count_dim.passenger_count_id;
```