1. How many records are in the vehicles table? Provide the query you’d use to determine this as well as the answer to the question.

SELECT COUNT(\*)

FROM vehicles;

Count = 33,442

1. Write a query that returns all the records in the vehicles table.

SELECT \*

FROM vehicles;

1. Write a query that returns the id, make, and model fields for all the records for 2010 vehicles.

SELECT id, make, model

FROM vehicles

WHERE year = 2010;

1. Write a query that returns the count of vehicles from 2010. Also provide the answer.

SELECT COUNT(\*)

FROM vehicles

WHERE year = 2010;

Count = 1,109

1. Write a query that returns the count of vehicles in the vehicles table between the years 2010 and 2015, inclusive. Provide the query as well as the answer.

SELECT COUNT(\*)

FROM vehicles

WHERE year BETWEEN 2010 AND 2015;

Count = 5,995

1. Write a query that returns the count of vehicles from the years 1990, 2000, and 2010. Provide the query and the result.

SELECT COUNT(\*)

FROM vehicles

WHERE year = 1990 OR year = 2000 OR year = 2010;

Count = 3,026

1. Write a query that returns the count of all records between 1987 and 2005, exclusive of the years 1990 and 2000.

SELECT COUNT(\*)

FROM vehicles

WHERE year BETWEEN 1987 and 1989 or year BETWEEN 1991 and 1999 or year BETWEEN 2001 and 2005;

Count = 17,235

1. Write a query that returns the year, make, model, and a field called average\_mpg that calculates the average highway/city fuel consumption. (For example, if hwy is 24 and cty is 20, then average\_mpg = (24 + 20)/ 2 = 22.)

SELECT year, make, model, (hwy + cty)/2 AS average\_mpg

FROM vehicles;

1. Write a query that returns the year, make, model, and a text field displaying “X highway; Y city.” (For example, if hwy is 24 and cty is 20, then hwy\_city is “24 highway; 20 city.”)

SELECT year, make, model, CONCAT(hwy, ' highway; ', cty, ' city') AS hwy\_cty

FROM vehicles;

1. Write a query that returns the id, make, model, and year for all records that have NULL for either the cyl or displ fields.

SELECT id, make, model, year

FROM vehicles

WHERE cyl IS NULL or displ IS NULL;

1. Write a query that returns all fields for records with rear-wheel drive and diesel vehicles since 2000, inclusive. Also sort by year and highway mileage, both descending. Hint: to view the distinct values in a field, you can use DISTINCT. For example, use SELECT DISTINCT(drive) FROM vehicles; to get the unique values that appear in that field, or use SELECT DISTINCT(fuel) FROM vehicles;.

SELECT \*

FROM vehicles

WHERE drive = 'Rear-Wheel Drive' AND fuel = 'Diesel' and year >= 2000

ORDER BY year DESC, hwy DESC;

1. Write a query that counts the number of vehicles that are either Fords or Chevrolets and either compact cars or 2-seaters. Provide the query and the answer.

SELECT COUNT(\*)

FROM vehicles

WHERE (make = 'Ford' OR make = 'Chevrolet')

AND (class = 'Compact Cars' OR class = 'Two Seaters');

Count = 612

1. Write a query that returns the records for 10 vehicles with the highest highway fuel mileage.

SELECT \*

FROM vehicles

ORDER BY hwy DESC

LIMIT 10;

1. Write a query that returns all the records of vehicles since the year 2000 whose model name starts with a capital X. Sort the list A through Z by make. What happens when you use a lowercase “x” instead?

SELECT \*

FROM vehicles

WHERE year >= 2000 AND model LIKE 'X%'

ORDER BY make DESC;

You get different results.

1. Write a query that returns the count of records where the “cyl” field is NULL. Provide the query as well as the answer.

SELECT COUNT(\*)

FROM vehicles

WHERE cyl IS NULL;

Count = 58

1. Write a query that returns the count of all records before the year 2000 that got more than 20 mpg hwy and had greater than 3 liters displacement (“displ” field). Provide the query as well as the answer.

SELECT COUNT(\*)

FROM vehicles

WHERE year < 2000 AND hwy > 20 AND displ > 3;

Count = 1,964

1. Write a query that returns all records whose model name has a (capital) X in its 3rd position. Hint: make sure your wildcard operator accommodates for any characters after the “X”!

SELECT \*

FROM vehicles

WHERE model LIKE '\_\_X%';