Week 4 Core Quiz

Question 1
Below is a table with three rows. What is the value of **AVG(items)** for this table?

order_id	items	total
829	3	38.92
220	7	107.06
1043	2	19.98

Ans: 4

Question 2
Which of the following statements are valid? (The column **color** is a string column, and both **red** and **blue** are integer columns.) Check all that apply.
Ans: SELECT MIN(blue + red) FROM wax.crayons;
SELECT -20 + MIN(red) FROM wax.crayons;
SELECT MIN(-20 + red) FROM wax.crayons;

Question 3
The **flights** dataset includes the departure delay (in minutes) and the scheduled time of departure (as an integer, for example 3:14 in the afternoon is 1514). Write and run a query to find the average delay of only those flights that were scheduled to depart after 1:00 in the afternoon. Do not include those scheduled for exactly 1:00. Report to the nearest minute. Note: There are two columns related to departure time—be sure you're using the scheduled departure time.
Ans: 13

Question 4
Here is the **default.orders** table:

order_id	cust_id	empl_id	total
1	c	1	24.78
2	a	4	28.54
3	b	3	48.69
4	b	3	-16.39
5	z	2	29.92

How many columns and rows does the result of this query have?
SELECT cust_id, COUNT(*), SUM(total)
FROM default.orders
GROUP BY cust_id;
Ans: 3 columns, 4 rows

Question 5
In the **fly.flights** table, the air time of each flight is given in minutes by the **air_time**

column. Write and run a query to find the average **air_time** of the flights, in hours, to the nearest tenth of an hour.
Ans: 1.8

Question 6
Write and run a query on the **fly.planes** table that would answer the question, "How many different manufacturers are there for each type of aircraft?" Then use the results to enter the number of balloon manufacturers are included in the table.
Ans: 528

Question 7
For a table of students enrolled at a college, the query **SELECT MIN(age) FROM students;** gave one row in the results, with only one column. The value was **16**. The query **SELECT COUNT(*) FROM students WHERE age IS NULL** returned the value **2827**. Choose which of the following statements is most accurate and informative:
Ans: The lowest known age of a student in the **students** table is 16.

Question 8
Which **SELECT** statements will return the same result as **SELECT COUNT(type) AS num_types FROM fly.planes;** Check all that apply.
Ans: SELECT COUNT(ALL type) AS num_types FROM fly.planes;
SELECT COUNT(*) AS num_types FROM fly.planes WHERE type IS NOT NULL;

Question 9
Write and run a query in the VM to find all the airports with average departure delays of more than 30 minutes. (Note that you want the origin airports, not the destinations.) How many airports have more than 30 minutes for their average departure delay?
Ans: 5

Question 10
Choose the **SELECT** statement that returns a result set describing, for each carrier, the average air time for the flights that have a departure delay longer than the flight's air time, and only for carriers with more than 70,000 of those flights.
Ans: SELECT carrier, AVG(air_time) FROM flights
WHERE dep_delay > air_time
GROUP BY carrier HAVING count(*) > 70000;