

## Carreras de Formula 1

Soluciones a las consultas SQL:

1. 

```
SELECT DISTINCT drivers.surname, drivers.forename
FROM drivers
      INNER JOIN results ON drivers.driverId = results.driverId
      INNER JOIN races ON results.raceId = races.raceId
WHERE year = 2016
```
2. 

```
SELECT name
FROM constructors
WHERE constructorId IN (SELECT constructorId
                        FROM results
                        GROUP BY constructorId
                        HAVING COUNT(DISTINCT driverId) > 50)
```
3. 

```
SELECT forename, surname
FROM drivers
WHERE driverId NOT IN (SELECT driverId
                       FROM results
                       WHERE positionOrder = 1)
```
4. 

```
-- Solución con HAVING COUNT
SELECT drivers.surname, drivers.forename
FROM drivers
WHERE driverId IN (SELECT driverId
                   FROM results
                   WHERE raceId IN (SELECT raceId FROM races WHERE year=2017)
                   GROUP BY results.driverId
                   HAVING COUNT(distinct results.raceId) = (SELECT COUNT(*)
                                                            FROM races
                                                            WHERE year=2017))

-- Solución con NOT EXISTS
SELECT drivers.surname, drivers.forename
FROM drivers
WHERE NOT EXISTS (SELECT *
                  FROM races
                  WHERE year = 2017
                  AND NOT EXISTS (SELECT *
                                FROM results
                                WHERE results.driverId = drivers.driverId
                                AND races.raceId = results.raceId))
```
5. 

```
SELECT circuits.circuitId, circuits.name, circuits.location, circuits.country, year
FROM races
      INNER JOIN circuits ON races.circuitId = circuits.circuitId
WHERE year BETWEEN 2015 AND 2017
ORDER BY circuits.circuitId
```
6. 

```
SELECT *
FROM constructors
WHERE constructors.constructorId NOT IN (SELECT qualifying.constructorId
                                         FROM qualifying)
```
7. 

```
SELECT drivers.surname, drivers.forename , tabla1.Ganado
FROM (SELECT driverId , COUNT(*) Ganado
FROM `results`
WHERE positionOrder = 1
GROUP BY driverId
HAVING COUNT(*) > 30 ) tabla1 JOIN drivers ON tabla1.driverId=drivers.driverId
```

- 
8. 

```
SELECT drivers.forename, drivers.surname, circuits.name, races.year, results.fastestLapSpeed
FROM drivers
    INNER JOIN results ON drivers.driverId = results.driverId
    INNER JOIN races ON races.raceId = results.raceId
    INNER JOIN circuits ON circuits.circuitId = races.circuitId
WHERE fastestLapSpeed >= ALL (SELECT fastestLapSpeed
                             FROM results)
```
- 
9. 

```
SELECT drivers.forename, drivers.surname, results.fastestLapSpeed
FROM drivers
    INNER JOIN results ON results.driverId = drivers.driverId
    INNER JOIN races ON races.raceId = results.raceId
WHERE races.year = 2009
    AND races.name = 'Japanese Grand Prix'
    AND results.fastestLapSpeed >= ALL (SELECT fastestLapSpeed
                                       FROM results
                                       INNER JOIN races ON
                                           ↳ races.raceId =
                                           ↳ results.raceId
                                       WHERE year = 2009
                                       AND name = 'Japanese Grand Prix')
```
- 
10. 

```
-- Solución con HAVING COUNT
SELECT drivers.forename, drivers.surname
FROM results
    INNER JOIN races ON races.raceId = results.raceId
    INNER JOIN drivers ON drivers.driverId = results.driverId
WHERE points > 0
    AND year = 2017
GROUP BY drivers.driverId, drivers.forename, drivers.surname
HAVING COUNT(*) = (SELECT COUNT(*)
                  FROM races
                  WHERE year = 2017)

-- Solución con NOT EXISTS
SELECT drivers.surname, drivers.forename
FROM drivers
WHERE NOT EXISTS ( SELECT *
                  FROM races
                  WHERE year = 2017 AND NOT EXISTS (SELECT *
                                                    FROM results
                                                    WHERE results.points > 0
                                                          AND drivers.driverId = results.driverId
                                                          AND results.raceId = races.raceId ))
```
- 
11. 

```
-- Solución con GROUP BY
SELECT drivers.forename, drivers.surname, circuits.name, races.year, COUNT(*)
FROM drivers
    INNER JOIN pitstops ON pitstops.driverId = drivers.driverId
    INNER JOIN races ON races.raceId = pitstops.raceId
    INNER JOIN circuits ON circuits.circuitId = races.circuitId
GROUP BY drivers.driverId, drivers.forename, drivers.surname, races.raceId, races.year,
↳ circuits.name
HAVING COUNT(*) >= ALL(SELECT COUNT(*)
                      FROM pitstops
                      GROUP BY driverId, raceId)

UNION

SELECT drivers.forename, drivers.surname, circuits.name, races.year, COUNT(*)
FROM drivers
    INNER JOIN pitstops ON pitstops.driverId = drivers.driverId
    INNER JOIN races ON races.raceId = pitstops.raceId
    INNER JOIN circuits ON circuits.circuitId = races.circuitId
GROUP BY drivers.driverId, drivers.forename, drivers.surname, races.raceId, races.year,
↳ circuits.name
HAVING COUNT(*) <= ALL(SELECT COUNT(*)
                      FROM pitstops
                      GROUP BY driverId, raceId)

-- Solución con el atributo stop
```
-

```
SELECT d.forename, d.surname, c.name, r.year, p.stop
FROM drivers d
      INNER JOIN pitstops p ON p.driverId = d.driverId
      INNER JOIN races r ON r.raceId = p.raceId
      INNER JOIN circuits c ON c.circuitId = r.circuitId
WHERE p.stop = (SELECT MAX(stop)
                FROM pitstops)
      OR p.stop = (SELECT MIN(stop)
                FROM pitstops)
```

```
12. SELECT drivers.forename, drivers.surname, constructors.name
FROM drivers
      INNER JOIN qualifying ON qualifying.driverId = drivers.driverId
      INNER JOIN constructors ON qualifying.constructorId = constructors.constructorId
      INNER JOIN races ON races.raceId = qualifying.raceId
WHERE races.year = 2017
      AND races.name = 'Abu Dhabi Grand Prix'
      AND constructors.constructorId IN (SELECT qualifying.constructorId
                                         FROM qualifying
                                         INNER JOIN races
                                         ON races.raceId =
                                         qualifying.raceId
WHERE races.year = 2017
      AND races.name = 'Abu
      Dhabi Grand Prix'
      AND qualifying.q1 <> ''

      AND qualifying.q2 <> ''
      AND qualifying.q3 <> ''

GROUP BY
      qualifying.constructorId
HAVING COUNT(DISTINCT
      qualifying.driverId) =
      2)

ORDER BY constructors.name ASC
```

```
13. SELECT drivers.forename, drivers.surname, races.name, races.year
FROM drivers
      INNER JOIN results ON results.driverId = drivers.driverId
      INNER JOIN races ON races.raceId = results.raceId
WHERE races.raceId IN (SELECT raceId
                       FROM results
                       INNER JOIN drivers ON drivers.driverId = results.driverId
                       WHERE drivers.nationality = "Russian")

      AND races.raceId IN (SELECT raceId
                       FROM results
                       INNER JOIN drivers ON drivers.driverId = results.driverId
                       WHERE drivers.nationality = "Polish")
```

```
14. SELECT drivers.forename, drivers.surname, SUM(results.laps)
FROM drivers
      INNER JOIN results ON results.driverId = drivers.driverId
      INNER JOIN races ON races.raceId = results.raceId
WHERE races.year = 2011
GROUP BY drivers.driverId, drivers.forename, drivers.surname
HAVING SUM(results.laps) > (SELECT AVG(nLaps)
                           FROM (SELECT SUM(laps) AS nLaps
                                FROM results
                                INNER JOIN races ON
                                races.raceId =
                                results.raceId
                                WHERE year = 2010
                                GROUP BY driverId) t)
```

```
15. SELECT name, year
FROM races
WHERE raceId IN (SELECT raceId FROM qualifying)
      AND raceId NOT IN (SELECT raceId FROM pitstops)
```

- ```

16. -- Solución con NOT EXISTS
SELECT DISTINCT nationality
FROM drivers
WHERE NOT EXISTS (SELECT *
                   FROM races
                   WHERE name = "Australian Grand Prix"
                   AND NOT EXISTS (SELECT *
                                   FROM results
                                   WHERE results.driverId = drivers.driverId
                                   AND results.raceId = races.raceId))

-- Solución con COUNT
SELECT drivers.nationality
FROM drivers
     INNER JOIN results ON results.driverId = drivers.driverId
     INNER JOIN races ON races.raceId = results.raceId
WHERE races.name = "Australian Grand Prix"
GROUP BY drivers.driverId, drivers.nationality
HAVING COUNT(*) = (SELECT COUNT(*)
                   FROM races
                   WHERE name = "Australian Grand Prix")



---


17. DELETE FROM qualifying
WHERE q1 = '' AND q2 = '' AND q3 = ''



---


18. SELECT *
FROM constructors
WHERE constructorId IN (SELECT results.constructorId
                       FROM results
                       INNER JOIN races ON races.raceId =
                           ↳ results.raceId
                       WHERE races.year BETWEEN 2003 AND 2010
                           AND results.positionOrder = 1
                       GROUP BY results.constructorId
                       HAVING COUNT(*) > 5)
AND constructorId NOT IN (SELECT results.constructorId
                          FROM results
                          INNER JOIN races ON races.raceId =
                              ↳ results.raceId
                          WHERE races.year > 2010)



---


19. -- Solución con NOT EXISTS
SELECT name, year
FROM races
WHERE NOT EXISTS (SELECT *
                  FROM status
                  WHERE statusId BETWEEN 2 AND 7
                  AND NOT EXISTS (SELECT *
                                  FROM results
                                  WHERE results.raceId = races.raceId
                                  AND results.statusId = status.statusId))

-- Solución con COUNT
SELECT races.raceId, races.name, races.year, COUNT(DISTINCT results.statusId)
FROM races
     INNER JOIN results ON results.raceId = races.raceId
WHERE results.statusId BETWEEN 2 AND 7
GROUP BY races.raceId, races.name, races.year
HAVING COUNT(DISTINCT results.statusId) = (SELECT COUNT(*)
   FROM status
   WHERE statusId BETWEEN 2 AND 7)



---


20. SELECT forename, surname, circuits.name, races.year, milliseconds
FROM drivers, pitstops, races, circuits
WHERE drivers.driverId=pitstops.driverId
  AND pitstops.raceId=races.raceId
  AND races.circuitId=circuits.circuitId
  AND drivers.nationality='Spanish'
  AND milliseconds = (SELECT MIN(milliseconds)
                     FROM status
                     WHERE statusId BETWEEN 2 AND 7)

```

```
FROM pitstops JOIN drivers ON pitstops.driverId=drivers.driverId
WHERE drivers.nationality='Spanish');
```

- 
21. 

```
SELECT DISTINCT name
FROM constructors
  INNER JOIN results ON results.constructorId = constructors.constructorId
  INNER JOIN drivers ON drivers.driverId = results.resultId
WHERE constructors.nationality LIKE 'Italian'
  AND drivers.nationality LIKE 'Italian'
```
- 
22. 

```
SELECT drivers.forename, drivers.forename, COUNT(*)
FROM drivers
  INNER JOIN results ON results.driverId = drivers.driverId
  INNER JOIN status ON status.statusId = results.statusId
WHERE status.status LIKE 'Accident'
GROUP BY drivers.driverId, drivers.forename, drivers.surname
HAVING COUNT(*) >= ALL (SELECT COUNT(*)
  FROM results
    INNER JOIN status ON status.statusId = results.statusId
    WHERE status.status LIKE 'Accident'
    GROUP BY results.driverId)
```
- 
23. 

```
SELECT drivers.forename, drivers.surname
FROM drivers
WHERE NOT EXISTS (SELECT *
  FROM races
  WHERE year = 2015
    AND NOT EXISTS (SELECT *
      FROM qualifying
      WHERE position <= 10
        AND qualifying.driverId = drivers.driverId
        AND qualifying.raceId = races.raceId))
```
- 
24. 

```
SELECT name
FROM constructors
WHERE constructorId NOT IN (SELECT constructorId
  FROM results JOIN drivers ON results.driverId=drivers.driverId
  WHERE nationality='Italian')
AND nationality='Italian';
```
- 
25. 

```
SELECT *
FROM constructors C
WHERE NOT EXISTS (SELECT *
  FROM races R
  WHERE year=2006
    AND NOT EXISTS (SELECT *
      FROM qualifying
      WHERE qualifying.raceId=R.raceId
        AND qualifying.constructorId=C.constructorId
        AND position <= 10))
```
- 
26. 

```
SELECT forename, surname, suma
FROM (SELECT driverId, year, SUM(points) as suma
  FROM results JOIN races ON results.raceId=races.raceId
  WHERE year BETWEEN 1990 AND 2000
  GROUP BY driverId, year
  HAVING SUM(points)>0) AS puntuaciones
JOIN drivers ON puntuaciones.driverId=drivers.driverId
WHERE suma >= ALL (SELECT SUM(points)
  FROM results JOIN races ON results.raceId=races.raceId
  WHERE year BETWEEN 1990 AND 2000
  GROUP BY driverId, year
  HAVING SUM(points)>0)
```
-

- 
27. 

```
SELECT DISTINCT d.forename, d.surname, r.name, r.year
FROM drivers d
      INNER JOIN results ON results.driverId = d.driverId
      INNER JOIN races r ON r.raceId = results.raceId
WHERE results.positionOrder = 1
      AND EXISTS (SELECT *
                  FROM qualifying
                  WHERE qualifying.raceId = r.raceId
                  AND qualifying.driverId = d.driverId
                  AND position > 10)
```
- 
28. 

```
SELECT drivers.forename, drivers.surname, COUNT(*)
FROM drivers
      INNER JOIN pitstops ON pitstops.driverId = drivers.driverId
      INNER JOIN races ON races.raceId = pitstops.raceId
WHERE races.year = 2013
GROUP BY pitstops.driverId, pitstops.raceId, drivers.forename, drivers.surname
HAVING COUNT(*) >= ALL (SELECT COUNT(*)
                       FROM pitstops
                       GROUP BY pitstops.driverId, pitstops.raceId)
```
- 
29. 

```
SELECT drivers.forename, drivers.surname
FROM drivers
WHERE NOT EXISTS (SELECT *
                  FROM races
                  WHERE year = 2017
                  AND NOT EXISTS (SELECT *
                                  FROM results
                                  WHERE positionOrder <= 10
                                  AND results.driverId = drivers.driverId
                                  AND results.raceId = races.raceId))
```
- 
30. 

```
SELECT *
FROM constructors C
WHERE NOT EXISTS (SELECT *
                  FROM races R
                  WHERE year=2006
                  AND NOT EXISTS (SELECT *
                                  FROM qualifying
                                  WHERE qualifying.raceId=R.raceId
                                  AND qualifying.constructorId=C.constructorId
                                  AND position <= 10))
```
- 
31. 

```
SELECT forename, surname, suma
FROM (SELECT driverId, year, SUM(points) as suma
      FROM results JOIN races ON results.raceId=races.raceId
      WHERE year BETWEEN 1990 AND 2000
      GROUP BY driverId, year
      HAVING SUM(points)>0) AS puntuaciones
JOIN drivers ON puntuaciones.driverId=drivers.driverId
WHERE suma >= ALL (SELECT SUM(points)
                  FROM results JOIN races ON results.raceId=races.raceId
                  WHERE year BETWEEN 1990 AND 2000
                  GROUP BY driverId, year
                  HAVING SUM(points)>0)
```
- 
32. 

```
SELECT drivers.forename, drivers.surname, COUNT(*)
FROM drivers
      INNER JOIN pitstops ON pitstops.driverId = drivers.driverId
      INNER JOIN races ON races.raceId = pitstops.raceId
WHERE races.year = 2013
GROUP BY pitstops.driverId, pitstops.raceId, drivers.forename, drivers.surname
HAVING COUNT(*) >= ALL (SELECT COUNT(*)
                       FROM pitstops
                       GROUP BY pitstops.driverId, pitstops.raceId)
```
-

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