

## 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 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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