1.

- a) SELECT nomepes, especialidademec FROM mecanico mec, pessoa pes WHERE mec.idpes=pes.idpes;
- b) SELECT idcir, nomecir, localcir
   FROM (circuito NATURAL JOIN corrida)
   WHERE datacor BETWEEN '2018-01-01' AND '2018-12-31';
- c) SELECT nomecir, datacor, categoriacor
   FROM circuito c LEFT OUTER JOIN corrida cor ON c.idcir=cor.idcir
   ORDER BY 1;
- d) SELECT nomeequ, COUNT(\*) AS QtdeMecanicos FROM (pessoa NATURAL JOIN mecanico) AS pemec JOIN equipe AS e ON pemec.idequ=e.idequ GROUP BY nomeequ HAVING COUNT(\*) > 1;
- e) SELECT nomepes FROM (piloto NATURAL JOIN pessoa) AS pipe WHERE NOT EXISTS
  (SELECT \* FROM (circuito NATURAL JOIN corrida) AS cico WHERE nomecir='Interlagos'
  AND NOT EXISTS
  (SELECT \* FROM participacao AS p
  WHERE pipe.idpes=p.idpes
  AND cico.idcor=p.idcor));
- 2. CREATE VIEW vencedores AS

(SELECT DISTINCT c1.idcor, datacor, categoriacor, nomepes AS nomeven, 'Piloto' AS tipoven

FROM corrida c1, participacao pt1, piloto p1, pessoa pes1

WHERE c1.idcor=pt1.idcor

AND pt1.idpes=p1.idpes

AND pl.idpes=pesl.idpes

AND pt1.tempopar <= ALL (SELECT tempopar

FROM participacao pt2
WHERE pt1.idcor=pt2.idcor
AND pt1.idpes<>pt2.idpes
AND pt1.voltaspar=pt2.voltaspar)

)

UNION

```
(SELECT DISTINCT c1.idcor, datacor, categoriacor, nomeequ AS nomeven, 'Equipe'
   AS tipoven
   FROM corrida c1, participacao pt1, equipe e1, pessoa pes1
   WHERE c1.idcor=pt1.idcor
   AND pt1.idpes=pes1.idpes
   AND e1.idequ=pes1.idequ
   AND pt1.tempopar <= ALL (SELECT tempopar
                              FROM participação pt2
                              WHERE pt1.idcor=pt2.idcor
                              AND pt1.idpes >pt2.idpes
                              AND pt1.voltaspar=pt2.voltaspar)
   )
   SELECT * FROM vencedores ORDER BY 5, 1;
3. WITH RECURSIVE mecsup(nivel, idsup, idpes, nomeequ, nomepes,
   especialidademec) AS
   (SELECT 0, root.idsup, root.idpes, root.nomeequ, root.nomepes,
   root.especialidademec
   FROM (mecanico NATURAL JOIN pessoa NATURAL JOIN equipe) AS root
   WHERE root.idpes = root.idsup
   UNION ALL
   SELECT nivel+1, child.idsup, child.idpes, child.nomeequ, child.nomepes,
   child.especialidademec
   FROM mecsup parent, (mecanico NATURAL JOIN pessoa NATURAL JOIN equipe)
   AS child
   WHERE child.idsup = parent.idpes
   AND child.nomeequ=parent.nomeequ
   AND child.idpes <> parent.idpes
   )
   SELECT DISTINCT nivel, idsup, idpes, nomepes, especialidademec
   FROM mecsup
   WHERE nomeequ = 'Aprilia Racing Team gresini'
   ORDER BY 1, 2, 3;
```