Exercise 1

1. SELECT Suppliers.names
   FROM Suppliers, Parts, Catalog
   WHERE Parts.color='red' AND Catalog.pid= Parts.pid AND Catalog.sid= Parts.sid

2. SELECT Catalog.sid
   FROM Parts, Catalog
   WHERE (Parts.color='red' OR Parts.color='green') AND Catalog.pid= Parts.pid

3. SELECT Suppliers.sid
   FROM Suppliers, Parts, Catalog
   WHERE Suppliers.address = '221 Packet street' OR (Parts.color='red' AND Parts.pid= Catalog.pid)

4. SELECT C.sid
   FROM Catalog C
   WHERE NOT EXIST (SELECT P.pid
                    FROM Parts P
                    WHERE (P.color='red' OR P.color='green')
                    AND (NOT EXIST (SELECT C1.pid
                                    FROM Catalog C1
                                    WHERE C1.sid = C.sid AND C1.pid = P.pid)))

5. SELECT C.sid
   FROM Catalog C
   WHERE NOT EXIST (SELECT P.pid
                    FROM Parts P
                    WHERE P.color='red'
                    AND (NOT EXIST (SELECT C1.pid
                                    FROM Catalog C1
                                    WHERE C1.sid = C.sid AND C1.pid = P.pid)))
        OR NOT EXIST (SELECT P1.pid
                      FROM Parts P1
                      WHERE P1.color='green'
                      AND (NOT EXIST (SELECT C2.pid
                                      FROM Catalog C2
                                      WHERE C2.sid = C.sid AND C2.pid = P.pid)))

6. SELECT C1.sid, C2.sid
   FROM Catalog C1, Catalog C2
   WHERE C1.pid = C2.pid AND C1.sid != C2.sid AND C1.cost > C2.cost

7. SELECT C.pid
   FROM Catalog C
   WHERE EXISTS (SELECT C1.sid
                FROM Catalog C1
                WHERE C1.pid = C.pid AND C1.sid != C.sid)

8. SELECT S.sid, AVG(C.cost)
   FROM Suppliers S, Parts P, Catalog C
   WHERE S.sid = C.sid AND C.pid = P.pid AND (P.colot = 'red' OR P.colot = 'green')

9. SELECT S.sid
   FROM Suppliers S
   WHERE EXISTS (SELECT C.sid
                FROM Catalog C
                WHERE C.cost >= 50)

Exercise 2

1. SELECT *
   FROM Author A, Book B
   WHERE A.author_id = B.editor

2. SELECT R.first_name, R.last_name
   FROM (SELECT A.author_id
           FROM Author A, Book B
           WHERE A.author_id != B.editor) R

3. SELECT A.author_id
   FROM Author A, Book B
   WHERE A.author_id != B.editor