Answer Key for SQL Questions

1) A list of the names of those employees who work for First Bank Corporation

   select person-name
   from works
   where company-name = "FBC"

2) A list of the names and cities of residence for those employees who work for First Bank Corporation.

   select e.person-name, e.city
   from employee as e, works as w
   where e.person-name = w.person-name and w.company-name = "FBC"

3) A list of the names, streets and cities of residence for those employees who work for First Bank Corporation and earn more than $10000 a year.

   select e.person-name, e.street, e.city
   from employee as e, works as w
   where e.person-name = w.person-name
   and w.company-name = "FBC"
   and w.salary > 10000

4) A list of the names of those employees who live in the same city as the company for which they work.

   select e.person-name
   from employee as e, works as w, company c
   where e.person-name = w.person-name
   and w.company-name = c.company-name
   and e.city = c.city

5) A list of the names of those employees who live in the same city and on the same street as their managers.

   select e.person-name
   from employee as e1, manages as m, employee as e2
   where e1.person-name = m.person-name
   and m.manager-name = e2.person-name
   and e1.street = e2.street
   and e1.city = e2.city
6) A list of the names of those employees who do not work for First Bank Corporation.

   If a person can only work for one employer:

   select person-name
   from works
   where company-name <> "FBC"

   If a person can work for more than one employer:

   select person-name
   from works
   where person-name not in (select person-name
                              from works
                              where company-name = "FBC")

7) A list of the names of those employees who make more than every employee of First Bank Corporation.

   select person-name
   from works
   where salary > all (select salary
                        from works
                        where company-name = "FBC")

8) Assume companies can be located in more than once city. A list of the names of those companies that are located in every city where First Bank Corporation is located.

   select c1.company-name
   from company c1
   where not exists (    (select city
                           from company
                           where company-name = "FBC")
                           except
                           (select c2.city
                            from company c2
                            where c1.company-name = c2.company-name))

**Additional Exercises**

Suppose a person can have more than one job. How do the schemas in the book change? How do the answers to the above queries change? Similarly, suppose a company can exist in more than one city. How do the schemas change? How would these changes affect your answers? What if both changes are made?