SELECT : GROUP BY

Determine the validity of the following three statements. Circle either True or False.

1. Group functions work across many rows to produce one result.

**True**

2. Group functions include nulls in calculations.

**False. Group functions ignore null values. If you want to include null values, use the NVL function.**

3. The WHERE clause restricts rows prior to inclusion in a group calculation.

**True**

4. Display the highest, lowest, sum, and average salary of all employees. Label the columns  
Maximum, Minimum, Sum, and Average, respectively. Round your results to the nearest whole number. Place your SQL statement in a text file named lab5\_6.sql.

5. Modify the query in lab5\_4.sql to display the minimum, maximum, sum, and average salary for each job type. Resave lab5\_6.sql to lab5\_4.sql. Run the statement in lab5\_5.sql.

**6. Write a query to display the number of people with the same job.**

**7. Determine the number of managers without listing them. Label the column Number of  
Managers. *Hint: Use the MANAGER\_ID column to determine the number of managers.***

**8. Write a query that displays the difference between the highest and lowest salaries. Label the column DIFFERENCE.**

**if you have time, complete the following exercises.**

**9. Display the manager number and the salary of the lowest paid employee for that manager.  
Exclude anyone whose manager is not known. Exclude any groups where the minimum  
salary is $6,000 or less. Sort the output in descending order of salary.**

**10. Write a query to display each department’s name, location, number of employees, and the average salary for all employees in that department. Label the columns Name, Location, Number of People, and Salary, respectively. Round the average salary to two decimal places.**

If you want an extra challenge, complete the following exercises:

11. Create a query that will display the total number of employees and, of that total, the number of employees hired in 1995, 1996, 1997, and 1998. Create appropriate column headings.

**12. Create a matrix query to display the job, the salary for that job based on department number, and the total salary for that job, for departments 20, 50, 80, and 90, giving each column an appropriate heading.**