

1. No-correlated subquery self-contained and can execute independently of the outer query. In a correlated subquery, the inner query depends on the outer query for its values, meaning it runs once for each row processed by the outer query.
2.

```
SELECT last_name, department_id, salary
FROM employees
WHERE (department_id, salary) IN
      (SELECT department_id, MAX(salary)
       FROM employees
       GROUP BY department_id);
```
3.

```
SELECT last_name, department_id, salary
FROM employees outer
WHERE 'x' IN (SELECT 'x'
              FROM employees inner
              WHERE inner.manager_id = outer.employee_id)
ORDER BY department_id;
```
4.

```
WITH max_calc_sal AS (
  SELECT job_title, MAX(salary) AS job_total
  FROM jobs j
  JOIN employees e ON j.job_id = e.job_id
  GROUP BY job_title
)
SELECT job_title AS JOB_TITLE, job_total AS JOB_TOTAL
FROM max_calc_sal
WHERE job_total > (SELECT MAX(salary) / 2 FROM employees)
ORDER BY job_total DESC;
```