1. $deptno\ \mathcal{G}\ COUNT(empno)\ (dept \Rightarrow\!\!\!\times\ emp)$

2. $\Pi_{e_2.ename}\left(\sigma_{e_1.mgr = e_2.empno \wedge e_1.ename = 'scott'}(\rho_{e_1}(emp) \bowtie \rho_{e_2}(emp))\right)$

3. $\Pi_{deptno,\ dname}(dept \bowtie emp) \div \Pi_{job}(\sigma_{sal > 3000 \wedge sal < 4000}(emp))$

4. $\Pi_{emp.ename,\ emp.sal\ avgsal}(\sigma_{emp.sal > avgsal}(emp \bowtie (deptno\ \mathcal{G}\ AVG(sal)\ as\ avgsal) \bowtie dept \bowtie emp)))$