

①  $\pi_{\text{person-name}} (\sigma_{\text{company-name} = 'FBC'} (\text{works}))$

②  $\pi_{\text{person-name}, \text{city}} (\text{employee} \times \sigma_{\text{company-name} = 'FBC'} (\text{works}))$

③  $\pi_{\text{person-name}, \text{street}, \text{city}} (\sigma_{\text{company-name} = 'FBC' \wedge \text{Salary} \geq 10000} (\text{works} \times \text{employee}))$

④  $\pi_{\text{person-name}} (\sigma_{\text{employee.city} = \text{Company.city}} (\text{employee} \times \text{works} \times \text{Company}))$

⑤  $\pi_{\text{person-name}} (\rho_{\text{employee} \times \text{manages}})$

$\bowtie$   $(\text{manager-name} = \text{employee2.person-name} \wedge$   
 $\text{employee.street} = \text{employee2.street} \wedge$   
 $\text{employee.city} = \text{employee2.city}$   
 $(\rho_{\text{employee2}} (\text{employee}))$

⑥  $\pi_{\text{person-name}} (\sigma_{\text{company-name} \neq 'FBC'} (\text{works}))$

⑦  $\pi_{\text{person-name}}(\text{works}) - (\pi_{\text{works.person-name}}(\text{works}))$

⊗  $\text{works.Salary} \leq \text{works2.Salary} \wedge$   
 $\text{works2.Company-name} = \text{'SBC'}$   
 $(\rho_{\text{works2}}(\text{works}))$

⑧  $\pi_{\text{company-name}}(\text{company} \div$

$\pi_{\text{city}}(\sigma_{\text{company-name} = \text{'SBC'}}(\text{company}))$