

1) $\pi_{sid, sname, size, city} (\sigma_{city = 'London'} (Supplier))$

2) $\pi_{pname} (Product)$

3) $\pi_{sid} (\sigma_{pid = 'P1' \vee pid = 'P2'} (Supply Product))$

4) $\pi_{sname} (\sigma_{pid = 'PS'} (Supplier * Supply Product))$

5) $\pi_{sname} (\sigma_{colour = 'red'} (Product * Supply Product * Supplier))$

6) $\pi_{sname} (Supplier * (\pi_{sid, pid} (Supply Product) \div \pi_{pid} (\sigma_{colour = 'red'} (Product))))$

$$7) \pi_{\text{name}} (\text{Supplier} \bowtie (\text{Supply Product} \bowtie$$

$$\sigma_{\text{colour} \vee \text{colour} \vee \text{colour}} (\text{Product}))$$

= 'red' = 'green' = 'blue'

$$8) \pi_{\text{name}} (\text{Supplier} \bowtie (\pi_{\text{id}} (\text{Supply Product} \bowtie \sigma_{\text{colour} = \text{'red'}} (P))))$$

$$\cap \pi_{\text{id}} (\text{Supply Product} \bowtie \sigma_{\text{colour} \vee \text{colour}} (\text{Product}))$$

= 'blue' = 'green'

$$9) \pi_{\text{id}} (\text{Supplier}) - \pi_{\text{id}} (\text{Supply Product})$$