

$$1a) \pi_{\text{COGNOME, NOME}} (SA \bowtie \sigma_{\text{POSIZIONE} = \text{'Repolere'}} SC)$$

$$1b) R\phi := \pi_{\text{CODICE, CITTA}} (UN) ; R1 := \rho_{C \leftarrow \text{CODICE}} (R\phi)$$

$$R2 := (\pi_{\text{CITTA}} (\sigma_{\text{CODICE} \neq C} (R\phi \bowtie R1))) \bowtie UN$$

$$R3 := \pi_{\substack{\text{RETTORE,} \\ \text{COGNOME,} \\ \text{NOME-R}}} \left(\rho_{\substack{\text{RETTORE} \leftarrow CF, \\ \text{NOME-R} \leftarrow \text{NOME}}} DO \right)$$

$$\pi_{\text{CITTA, CODICE, NOME, COGNOME, NOME-R}} (R2 \bowtie R3)$$

$$1c) R\phi := \pi_{\text{CODICE, ATEVEDO, N-ISCRITTI}} (FA)$$

$$R1 := \rho_{C \leftarrow \text{CODICE, N} \leftarrow \text{N-ISCRITTI}} (R\phi)$$

$$R2 := R\phi - \pi_{\text{CODICE, ATEVEDO, N-ISCRITTI}} (\sigma_{\text{N-ISCRITTI} > N} (R\phi \bowtie R1))$$

$$R3 := FA \bowtie R2$$

$$\left(\rho_{\substack{\text{ATEVEDO} \leftarrow \text{CODICE,} \\ \text{NOMEA} \leftarrow \text{NOME,} \\ \text{N-A} \leftarrow \text{N-ISCRITTI}}} UN \right) \bowtie FA$$

$$1d) R\phi := \pi_{\text{NOME, ATEVEDO}} (FA)$$

$$R1 := (\pi_{\text{NOME}} (FA)) \bowtie (\rho_{\text{ATEVEDO} \leftarrow \text{CODICE}} (\pi_{\text{CODICE}} (UN)))$$

$$FA - FA \bowtie (\pi_{\text{NOME}} (R1 - R\phi))$$