

3) Disciplinas cursadas por 2 ou + alunos

$$R_1 \leftarrow \pi_{\text{codig}} (\sigma_{\text{matricula1} \neq \text{matricula2}} (\text{Curso}_1 \bowtie_{\text{codig}} \text{Curso}_2))$$

$$R_2 \leftarrow \pi_{\text{codig}} \text{Curso} - \pi_{\text{codig}} R_1$$

9)

$$R_1 \leftarrow \pi_{\text{codig}} \text{Disciplina} - \pi_{\text{codig}} \text{Curso}$$

$$R_2 \leftarrow \pi_{\text{nome}} (R_1 \bowtie_{\text{codig}} \text{Disciplina})$$

h)

$$R_1 \leftarrow \pi_{\text{matricula}} (\sigma_{\text{codig1} \neq \text{codig2}} (\text{Curso}_1 \bowtie_{\text{matricula}} \text{Curso}_2))$$

$$R_2 \leftarrow \pi_{\text{nome aluno}} (R_1 \bowtie_{\text{matricula}} \text{Alunos})$$

1) $\Pi_{\text{matricula, nome, ano-adm, data-nas}}$ (Aluno)

$\{t.\text{matricula}, t.\text{nome}, t.\text{ano-adm}, t.\text{data-nas} \mid t \in \text{Aluno}$
and $t.\text{data-nas} > 16/07/1984\}$

2) $\Pi_{\text{matricula Aluno}} - \Pi_{\text{matricula Curso}}$
 $\{t.\text{matricula} \mid t \in \text{Matricula and } \nexists f \in \text{Curso} (f.\text{matricula} = t.\text{matricula})\}$

3) $R_1 \leftarrow \Pi_{\text{codigo}} \left(\Pi_{\text{nome disciplina}} = (\text{Disciplina}) \right)$
 $R_2 \leftarrow \Pi_{\text{matricula}} \left(\Pi_{\text{nota} = 'A'} \left(\text{Curso } \bowtie R_1 \right) \right)$