

Lista 6 - BDII Beatriz Rodrigues

1

a) $\pi_{\text{a}}.\text{name_aluno}, \text{d}.\text{name_disciplina}, \text{m}.\text{nota}$

|

$\wedge \text{a}.\text{id_aluno} = \text{m}.\text{id_aluno}$

$\text{por}(\text{aluno})$

$\wedge \text{m}.\text{id_disciplina} = \text{d}.\text{id_disciplina}$

$\text{pm}(\text{matriculado})$

$\text{pd}(\text{disciplinas})$

b) $\pi_{\text{p}}.\text{name_professor}, \text{count}(\ast)$

|

$\wedge \text{p}.\text{id_professor} = \text{d}.\text{id_professor}$

$\text{pp}(\text{professor})$

$\text{pd}(\text{disciplina})$

$\cup \pi_{p\text{-name}-professor} \circ$

$\wedge \not\exists \pi_{d\text{-id}-professor}$

$\wedge p\text{-id}-professor = d\text{-id}-professor$

$pp(\text{professor})$

$p^d(\text{disciplina})$

c) $p\text{-id}-professor \vee p\text{-name}-professor \wedge p \rightarrow \text{egename}$
 $\wedge \forall m(d\text{-carga-horaria})$

$\wedge p\text{-id}-professor = d\text{-id}-professor$

$pp(\text{professor})$

$p^d(\text{disciplina})$

U

$\forall p.\text{nome_professor} \parallel \parallel \exists p.\text{sobrenome}, \varrho$

$\exists p.\text{id_professor} = d.\text{id_professor}$

pp (professor)

pd (disciplina)

$d.\text{id_disciplina} \vee d.\text{nome_disciplina}, \text{AVG(m_nota)}$

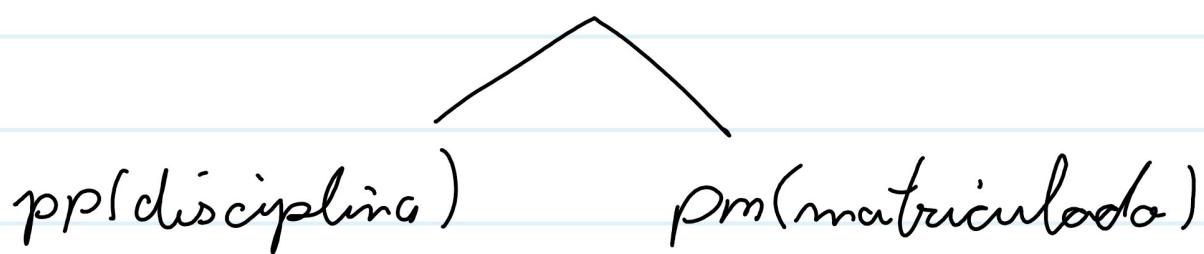
$\forall d.\text{id_disciplina} = m.\text{id_disciplina}$

pd (disciplina)

pm (matriculado)

e) d.id_disciplina ∨ d.nome_disciplina, max(m.nota),
 min(m.nota) |

Ad. id_disciplina = m.id_disciplina

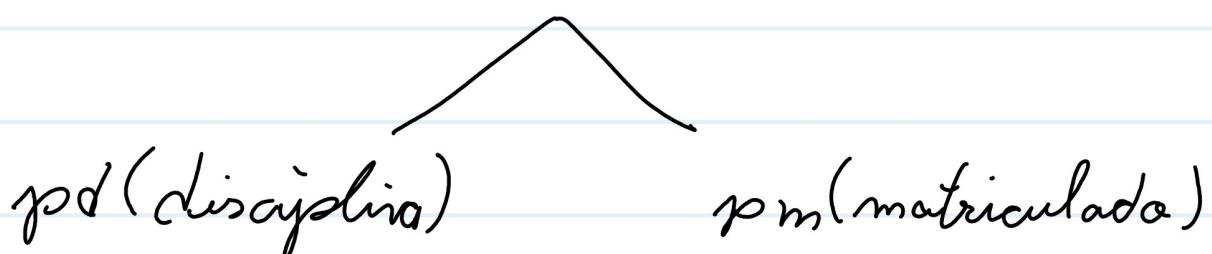


f) ∃ d.nome_disciplina

Om. id_aluno = ?id_aluno (aluno)

|
Nome_aluno = 'Jose'

Ad. id_disciplina = m.id_disciplina



d. id_disciplina \vee d. nome_disciplina



$\sigma \text{count}(*) \geq 2$



\bowtie

disciplina

matriculado

g) $\pi_{\text{distinct}(\text{a. nome_aluno})}$



$\sigma \text{d. carga_horaria} \geq 60$

\bowtie

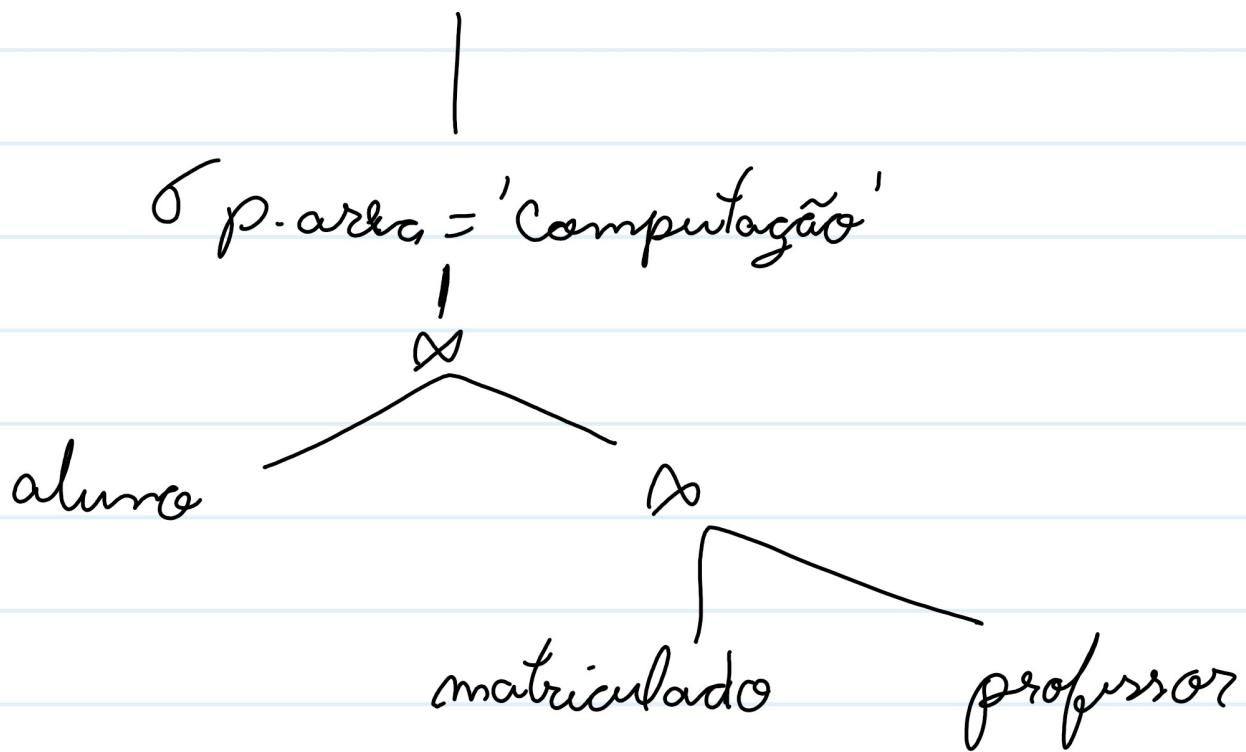
aluno

\bowtie

matriculado disciplina

h) $\text{medio} \setminus \text{desc.nome_aluno, medio(aluno)}$

J) $\text{p.distinct} \text{ a_name_aluno}$



K) $\text{p.id_professor} \setminus \text{p.name_professor, Sum(d.oarga_horaria)}$

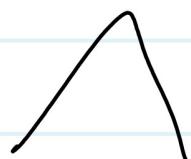
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graph TD
    SP[professor] --- SP_D[ ]
    SP_D --- SDU["σp.id\_professor"]
    SDU --- D[disciplina]
    
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$\exists p \text{- nome_professor}, 0$

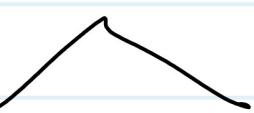


$\exists p \text{- id_professor} = d \text{- id_professor}$



pp(professor) pd(disciplines)

$\exists d \text{- nome_disciplina} \forall d \text{- nome_disciplina} \text{ count}(\#)$



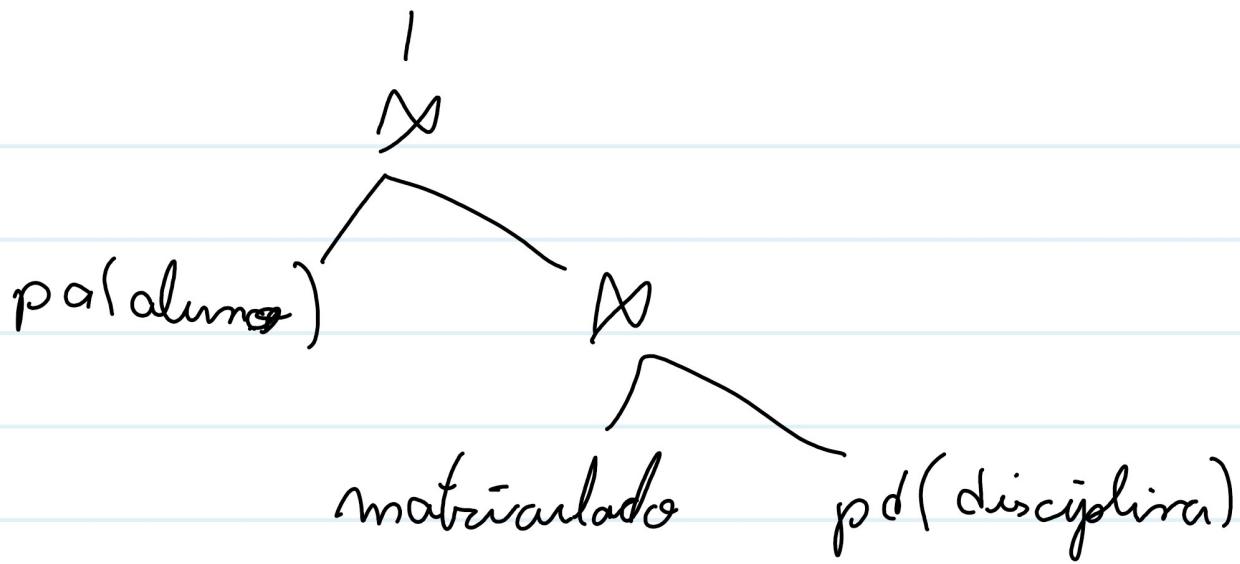
pd(disciplina) matriculados

$\exists a \text{- id_aluno} \forall a \text{- nome_aluno}$

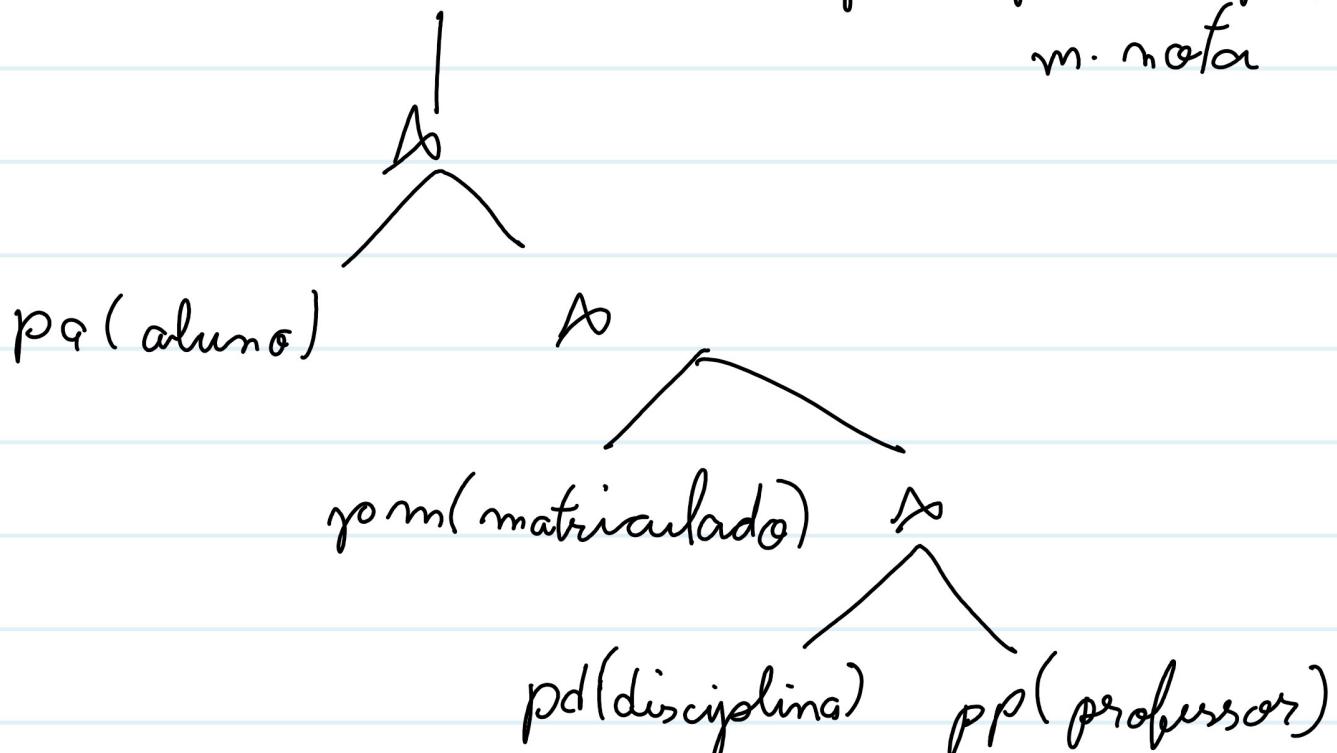


$\exists \text{SUM}(d \text{- carga_horaria}) > 100$





n) $\pi_{a \cdot nome - aluno, d \cdot nome - disciplina, p \cdot nome - professor}$,
 $m \cdot nota$



o) $\pi_{d \cdot nome - disciplina}$ (disciplina)

$\delta_{d \cdot id_professor = Null}$

p) $\pi_{\text{distinct}} p \cdot \text{name_professor}$



$\sigma_{\exists p \cdot \text{id_professor} = d \cdot \text{id_professor}}$

$pp(\text{professor})$

$pd(\text{disciplina})$

qg) $\pi_{a1 \cdot \text{name_aluno}, a2 \cdot \text{name_aluno}}$



$\sigma_{a1 \cdot \text{id_aluno} < a2 \cdot \text{id_aluno}}$

$pa1(\text{aluno})$

$pa2(\text{aluno})$

qr) $\pi_{d \cdot \text{id_disciplina}, d \cdot \text{name_disciplina}}$



$\sigma_{\text{Ad. id-disciplina}} = \text{m. id-disciplina}$

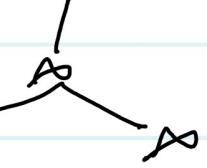
$P_d(\text{disciplina})$

$P_m(\text{matriculado})$



$p_c(\text{compra})$

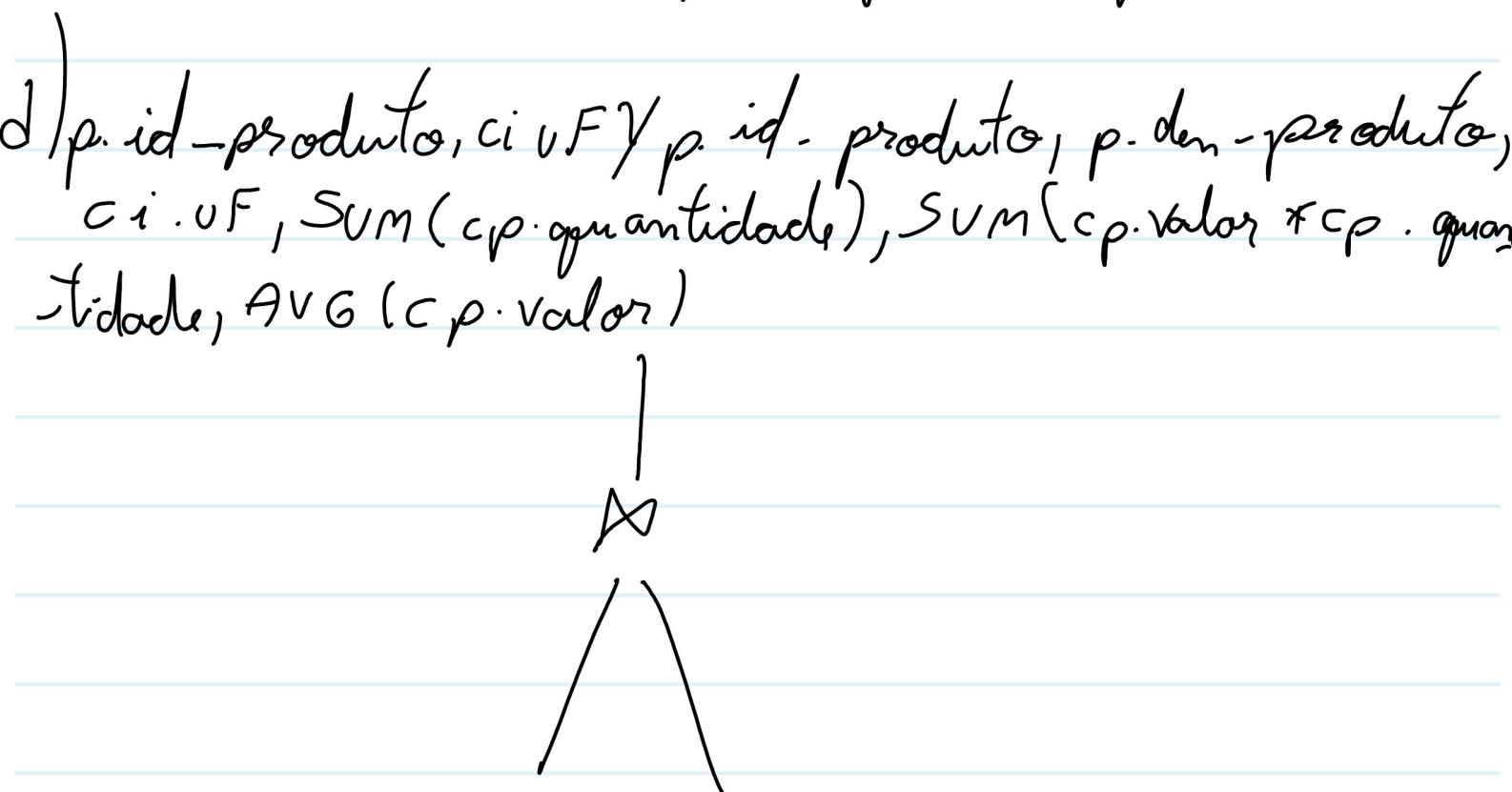
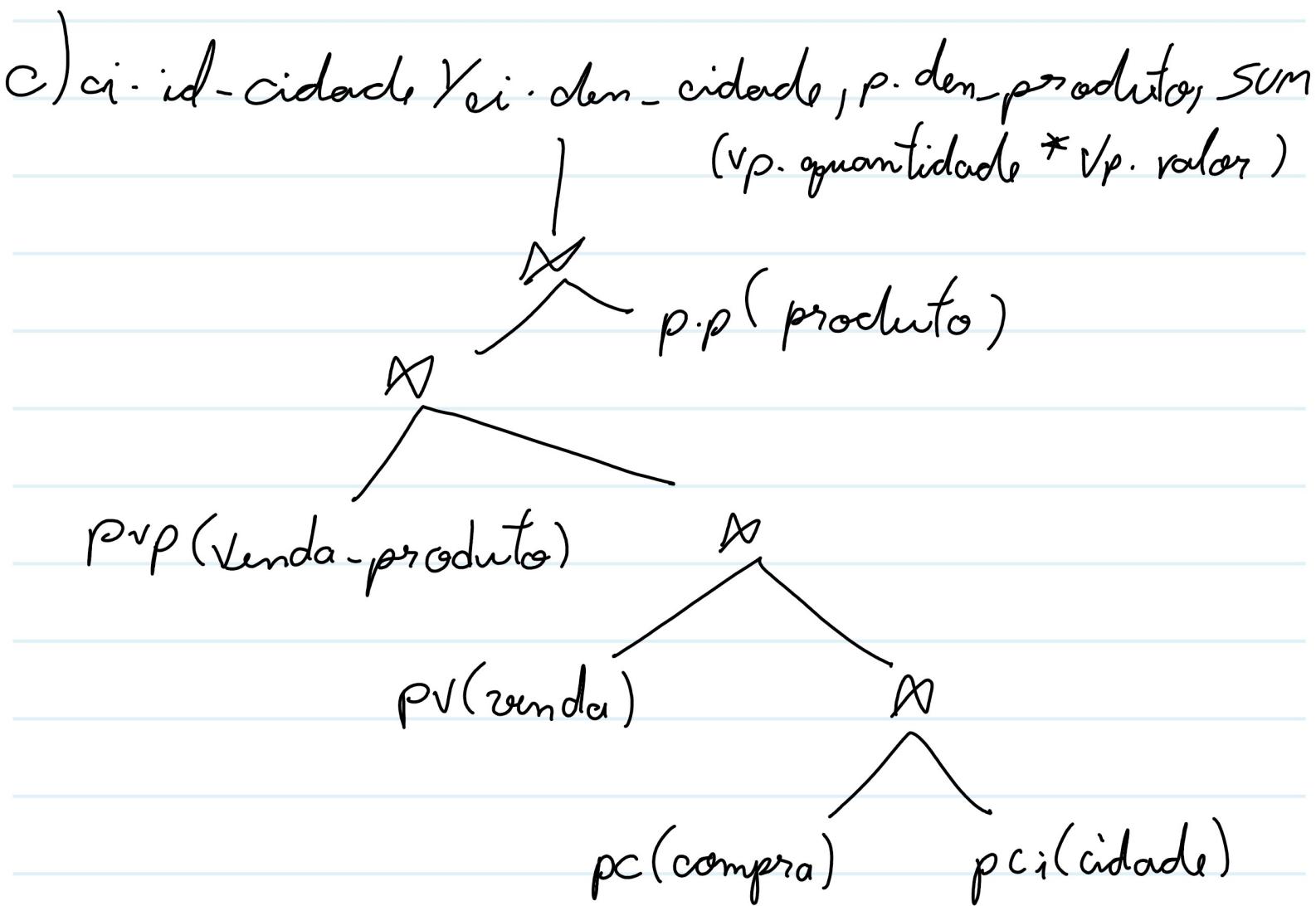
$p_c(\text{fornecedor})$

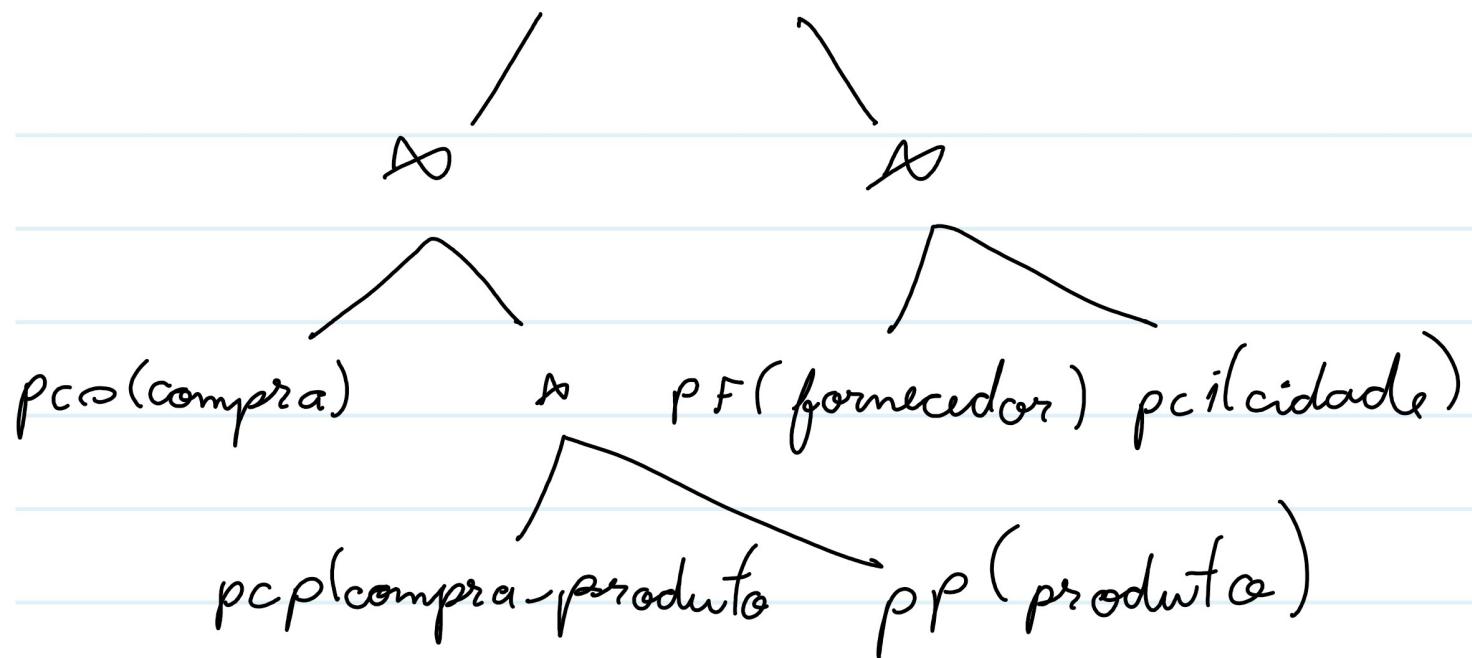


$p_v(\text{Venda})$

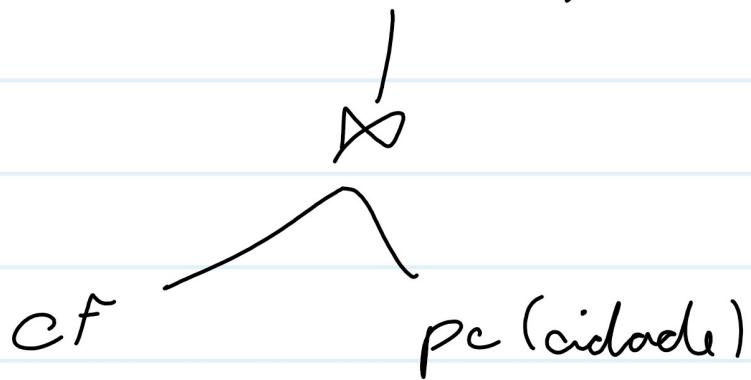
$p_c(\text{compra}) \quad p_{ci}(\text{cidade})$

($v.\text{valor - Total}$)





e) $c.\text{id_cidade} \vee c.\text{id_cidade}, c.\text{den_cidade}), \text{count}(\ast)$



f) $\pi \text{id_conta_pagar} (\text{conta_pagar})$

Odata_vencimento <= '2011-12-31'

\wedge
 $\text{pago} <> 's'$

F.id - fornecedor | F.id - fornecedor, F.den - fornecedor
] com†(*)

σ_{count(*) > 10}

