

- 1 - E
- 2 - B
- 3 - C
- 4 - D
- 5 - E
- 6 - B

Nos bancos de dados...

$$A = (\underline{KA}, A1, KD, (KD) \text{ references } D)$$

$$B = (\underline{KB}, B1, KA, (KA) \text{ references } A)$$

$$B - B2 = (\underline{KB}, B22, B23, B24, (KB) \text{ references } B)$$

$$C = (\underline{KA}, C1, C2, (KA) \text{ references } A)$$

$$D = (\underline{KD}, D1, KA, (KA) \text{ references } A)$$

$$E = (\underline{KE}, E1)$$

$$F = (\underline{KE}, F22, F21, F23, (KE) \text{ references } E)$$

$$DE = (\underline{KD, KE, XXX, YX}, (KD) \text{ references } D, (KE) \text{ references } E)$$

$$CDE = (\underline{KA, KD, KE, XXX}, \underline{AAA, ZZZ}, (KA) \text{ references } C, (KD, KE, XXX) \text{ references } DE)$$

$$CF = (\underline{KA, KE, F22}, (KA) \text{ references } C, (KE, F22) \text{ references } F)$$

$$a) \prod_{\text{cod-imov}, \text{inscr-imob}} (\text{imoveis}) \text{ — }$$

$$\prod_{\substack{i: \text{cod-imov}, \\ i: \text{inscr-imob}}} \left( \bigvee_{i: \text{area} < ij: \text{area}} \left( \rho_i(\text{imoveis}) \times \rho_{ij}(\text{imoveis}) \right) \right)$$

$$b) \prod_{\substack{f: \text{cod-cl}, \\ f: \text{nome}}} \left( \bigvee_{\substack{f: \text{cod-cl} = c: \text{cod-~~cli~~-fiador \\ \wedge l: \text{cod-cl} = c: \text{cod-~~cli~~-locatario \\ \wedge f: \text{ano-nax} < l: \text{ano-nax}}} \left( \rho_c(\text{contrato-aluguel}) \times \rho_l(\text{clientes}) \times \rho_f(\text{clientes}) \right) \right)$$

$$c) \prod_{p: \text{nome}} \left( \bigvee_{p: \text{cod-cl}} \left( \bigvee_{p: \text{cod-cl} = ip: \text{cod-cl}} \left( \rho_p(\text{clientes}) \times \rho_{ip}(\text{imov-pes-prop}) \right) \right) \right)$$

$$\bigvee \prod_{\substack{f: \text{cod-cl}, \\ f: \text{nome}}} \left( \bigvee_{f: \text{cod-cl} = c: \text{cod-pes-fiador}} \left( \rho_f(\text{clientes}) \times \rho_c(\text{contrato-aluguel}) \right) \right)$$

$$d) \prod_{\text{cod-imov}, \text{inscr-imob}} (\text{imoveis}) \text{ — }$$

$$\prod_{\substack{i: \text{cod-imov}, \\ i: \text{inscr-imob}}} \left( \bigvee_{\substack{i: \text{cod-imov} = ip: \text{cod-imov} \\ \wedge ip: \text{cod-cl} = c: \text{cod-cl} \\ \wedge c: \text{ano-nax} < 1955}} \left( \rho_i(\text{imoveis}) \times \rho_{ip}(\text{imov-pes-prop}) \times \rho_c(\text{clientes}) \right) \right)$$

OBS: Contrato - Aluguel  $\Rightarrow$  Contrato - Alg.