



19 de DICIEMBRE 2022

a) $\text{dom}(c) = \text{dom}(c') = \text{CUENTA}$

CRT

$$\left\{ t_{11} / (\exists c) [c[\text{on}i] = t[\text{on}i] \wedge (c[\text{cm}] = m_i) \wedge \right. \\ \left. \neg (\exists c') (c'[\text{on}i] = c[\text{on}i] \wedge (c'[\text{cm}] = m'_i)) \right\}$$

CRD

$$\left\{ \langle \text{dni} \rangle / (\exists cm, u, f) (\langle \text{dni}, cm, u, f \rangle \in \text{CUENTA}) \wedge (cm = m_i) \wedge \right. \\ \left. \neg (\exists cm', u', f') (\langle \text{dni}, cm', u', f' \rangle \in \text{CUENTA}) \wedge (cm' = m'_i) \right\}$$

b) CRT

$$\text{dom}(c) = \text{dom}(c') = \text{CUENTA}$$

$$\left\{ t_{11} / \exists c [c[\text{on}i] = t[\text{on}i] \wedge (c[\text{cm}] = m_i) \wedge \right.$$

$$\left. \neg (\exists c') (c'[\text{on}i] = c[\text{on}i] \wedge (c'[\text{cm}] < m'_i)) \right\}$$

CRD

$$\left\{ \langle \text{dni} \rangle / (\exists cm, u, f) (\langle \text{dni}, cm, u, f \rangle \in \text{CUENTA}) \wedge (cm = m_i) \wedge \right. \\ \left. \neg (\exists cm', u', f') (\langle \text{dni}, cm', u', f' \rangle \in \text{CUENTA}) \wedge (cm' > m'_i) \right\}$$

c) CBT

$\text{dom}(c) = \text{dom}(c') = \text{CUENTA}$

$\text{dom}(m) = \text{MAQUINA}$

$$\left\{ t_1 / (\exists c) (t[\text{dom}] = c[\text{dom}]) \wedge (\forall m) (m[s_0] \rightarrow \text{Linux}') \vee (\exists c') (c[\text{dom}] = c'[\text{dom}]) \wedge (c'[cm] = c[cm]) \right\}$$

CBD

$$\left\{ \langle \text{dni} / (\exists cm, u, j) (\langle \text{dni}, cm, u, j \rangle \in \text{CUENTA}) \wedge (\forall m) (\neg cm, t', \text{Linux}' \not\in \text{MAQUINA}) \vee (\exists cm', u', j') (\langle \text{dni}, cm', u', j' \rangle \in \text{CUENTA}) \right\}$$

d) CBT

$\text{dom}(c) = \text{dom}(c') = \text{CUENTA}$

$$\left\{ t_1 / (\exists c) (t[\text{dom}] = c[\text{dom}]) \wedge \begin{array}{l} \gamma (\exists c') (c[\text{dom}] = c'[\text{dom}]) \wedge (c[cm] \rightarrow c'[cm]) \end{array} \right\}$$

CBD

$$\left\{ \langle \text{dni} / (\exists cm, u, j) (\langle \text{dni}, cm, u, j \rangle \in \text{CUENTA}) \wedge \gamma (\exists cm', u', j') (\langle \text{dni}, cm', u', j' \rangle \in \text{CUENTA}) \wedge (cm \leq cm') \right\}$$

e) CBT

$\text{dom}(c) = \text{dom}(c') = \text{CUENTA}$

$\text{dom}(m) = \text{dom}(m') = \text{MAQUINA}$

$$\left\{ t_1 / (\exists c) (t[\text{dom}] = c[\text{dom}]) \wedge (\exists m) (m[cm] = c[cm]) \wedge (\forall m') (m[t] \rightarrow m'[t]) \wedge \begin{array}{l} \gamma (\exists c') (c[cm] \rightarrow c'[cm]) \wedge (c[\text{dom}] = c'[\text{dom}]) \end{array} \right\}$$

CBD

$$\left\{ \langle \text{dni} / (\exists cm, u, j) (\langle \text{dni}, cm, u, j \rangle \in \text{CUENTA}) \wedge (\exists , t, s_0) (\neg t, s_0 \in \text{MAQUINA}) \wedge (\forall t', s_0') (\langle t', s_0' \rangle \in \text{MAQUINA}) \wedge (t' \subset t) \wedge \begin{array}{l} \gamma (\exists cm', u', j') (\langle \text{dni}, cm', u', j' \rangle \in C) \wedge (cm \leq cm') \end{array} \right\}$$

26 de Junio

CAT

c) $\text{dom}(p) = \text{dom}(p') = \text{UBICACION}$

$$\{ t, / (\exists p) (t[A] = p[\alpha]) \wedge (\exists p') (p'[rr] = p[\alpha']) \wedge (p[\alpha] < p'[\alpha]) \}$$

CBD

$$\{ \langle pr \rangle / (\exists a) (\langle pr, a \rangle \in \text{UBICACION}) \wedge (\exists a', pr) (\langle a', pr \rangle \in \text{OBICACION}) \wedge \\ (pr = pr') \wedge (a < a') \}$$

b) CAT

$$\text{dom}(r) = \text{UBICACION}$$

$$\{ t, / (\exists r) (r[ni] = t[m]) \wedge (t[e] = r[d]) \wedge (\exists r') (r[t] = r'[e]) \}$$

c) CAT

$$\text{dom}(o) = \text{dom}(o') = \text{PISTAS}$$

$$\text{dom}(v) = \text{UBICACION}$$

$$\{ t, / (\exists a) (a[\alpha] = t[\alpha]) \wedge (\forall v) (v[m] = \text{Madrid}) \wedge (\exists a') (a'[\alpha] > a[\alpha]) \}$$

$$\wedge (a[\alpha] = v[\alpha]) \wedge (a'[\alpha] = v[\alpha]) \quad \}$$

CBD

$$\{ \langle a \rangle / (\exists pr) (\langle a, pr \rangle \in \text{UBICACION}) \wedge (pr = \text{Madrid}) \wedge (\exists a, pi, p) (\langle a, pi, p \rangle \in \text{PISTAS}) \wedge \\ (\exists a') (\langle a', \text{madrid} \rangle \in \text{UBICACION}) \wedge (\exists pi', p') (\langle a', pi', p' \rangle \in \text{PISTAS}) \wedge (p' > p) \}$$

d) CAR

$$\text{dom}(r) = \text{dom}(r') = \text{REGISTRO} \quad \text{dom}(p) = \text{Pistos}$$

$$\left\{ t_{11} / (\exists r) (r[t] = \text{'carga'}) \wedge (r[op] = \text{'abrir'}) \wedge (\exists r') (r'[a] = r[t]) \wedge (r[n] = p[n]) \right. \\ \left. \wedge (r'[op] <> r[op]) \wedge (r[b] > r[t]) \right\}$$

CAB

$$\{ \text{CAB} / (\exists p) (p[h], op, t) \}$$