Vraag 1:

$$\forall z\, G(z),\ \forall y(G(y) \to \forall x(\neg F(x) \lor H(y,x))) \vDash \forall x\, \neg(F(x) \land \forall z\, \neg H(x,z))$$

0

$\big|\forall R \quad D = \{d_1\}$

$0 \quad \neg(F(d_1) \land \forall z\, \neg H(d_1,z))$

$\big|\neg R, \land L \qquad\qquad\qquad \neg R \text{ dan } \land L$

$F(d_1),\quad \forall z\, \neg H(d_1,z) \quad 0$

$\big|\forall L$

$\forall z\, G(z),\quad (G(d_1) \to \forall x(\neg(F(x) \lor H(d_1,z)))) \quad 0$

$\big| L \to$

$\forall x(\neg(F(x) \lor H(d_1,x))) \quad 0 \qquad\qquad\qquad 0 \quad G(d_1)$

$\big|\forall L \qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad \big|\forall L$

$\neg(F(d_1) \lor H(d_1,d_1)) \quad 0 \qquad\qquad\qquad G(d_1) \quad 0 \quad G(d_1)$

$\big|\neg L$

$0 \quad F(d_1) \lor H(d_1,d_1)$

$\big|\lor R$

$F(d_1) \qquad 0 \quad F(d_1),\ H(d_1,d_1)$

Vraag 2

$$\forall x\,(Q(x) \rightarrow R(x)),\ \forall x\,(S(x) \rightarrow T(x)) \vdash \forall x\,(R(x) \rightarrow S(x))$$
$$\rightarrow \forall y\,(Q(y) \rightarrow T(y))$$

(1) $\forall x\,(R(x) \rightarrow S(x))$ (2) $\forall x\,(Q(x) \rightarrow R(x)),\ \forall x\,(S(x) \rightarrow T(x))$
EA

(2) $Q(d_1)$

$Q(d_1)$ $Q(d_1) \rightarrow R(d_1)$ $S(d_1) \rightarrow T(d_1)$

(1)

$\dfrac{\forall x\,(R(x) \rightarrow S(x))}{(R(d_1) \rightarrow S(d_1))}$ AV $\dfrac{R(d_1)}{R(d_1)}$ EA

$\dfrac{(R(d_1) \rightarrow S(d_1))\quad R(d_1)}{S(d_1)}$ E→

$\dfrac{S(d_1)\qquad S(d_1) \rightarrow T(d_1)}{T(d_1)}$ E→

$\vdots$

$\dfrac{T(d_1)}{}$ I→ [-(2)]

$\dfrac{(Q(d_1) \rightarrow T(d_1))}{\forall y\,(Q(y) \rightarrow T(y))}$ AI

$\dfrac{\forall y\,(Q(y) \rightarrow T(y))}{\forall x\,(R(x) \rightarrow S(x)) \rightarrow \forall y\,(Q(y) \rightarrow T(y))}$ I→ [-(1)]

heb eerst vanonder naar $T(d_1)$ gewerkt. Dan van start naar beneden.