# 1

In all cases we assume that the result it $t$.

## a)

[Darth Vader]$_e$ [is [[the father of]$_{(e,(t,e))}$ Luke$_e$]]$_{(e,t)}$

$$\text{father}(dw, l)$$

## b)

[[Every]$_e$ Jedi$_{(e,t)}$] [has [a lightsaber]$_e$]$_{(e,t)}$

$$\forall x : \text{jedi}(x) \to \text{has}(x, l)$$

## c)

[Padmé Amidala]$_e$ [is [the [[most$_{(((e,t),(e,t)),((e,t),(e,t)))}$ beautiful$_{((e,t),(e,t))}$] woman$_{(e,t)}$]] on Naboo$_e$]$_{(e,t)}$

$$\text{woman}(pa) \wedge \text{is\_on}(pa, nb) \wedge \forall w : (\text{woman}(w) \wedge \text{is\_on}(w, nb)) \to \text{more\_same\_beautiful}(pa, w)$$

# 2

## 2.1

### a)

$$V_M(\text{anakin}) = e_1, \ V_M(\text{yoda}) = e_2, \ V_M(\text{padme}) = e_3,$$

### b)

$$V_M(\text{jedi}) = [e_1 \to 1, e_2 \to 1, e_3 \to 0]$$

### c)

$$V_M(\text{help}) = [$$
$$e_1 \to [e_1 \to 0, e_2 \to 1, e_3 \to 1],$$
$$e_2 \to [e_1 \to 1, e_2 \to 0, e_3 \to 1],$$
$$e_3 \to [e_1 \to 0, e_2 \to 0, e_3 \to 1]$$
$$]$$

## 2.2

### a)

$$[\![\text{help}(\text{padme})]\!]^{M,g} = [\![\text{help}]\!]^{M,g}([\![\text{padme}]\!]^{M,g}) = [e_1 \to 1, e_2 \to 1, e_3 \to 1]$$

### b)

$$[\![\forall x \text{help}(x)(x) \to \neg\text{jedi}(x)]\!]^{M,g} = 1$$

### c)

$$[\![\forall F \exists x : F(x)]\!]^{M,g} = 1$$