

Assume the following.

$$True \quad (4)$$

Assume the following.

$$\forall A.27a.nonempty\ A.27a \Rightarrow (\forall V0t \in 2.((\forall V1x \in A.27a.(p\ V0t)) \Leftrightarrow (p\ V0t))) \quad (5)$$

Assume the following.

$$\forall A.27a.nonempty\ A.27a \Rightarrow (\forall V0x \in A.27a.((V0x = V0x) \Leftrightarrow True)) \quad (6)$$

Assume the following.

$$\begin{aligned} &\forall A.27a.nonempty\ A.27a \Rightarrow \forall A.27b.nonempty\ A.27b \Rightarrow \forall A.27c. \\ &nonempty\ A.27c \Rightarrow (\forall V0f \in (A.27b^{A.27a}).(\forall V1g \in (A.27a^{A.27c}). \\ &(\forall V2x \in A.27c.((ap\ (ap\ (ap\ (c.2Ecombin.2Eo\ A.27c\ A.27b\ A.27a) \\ &V0f)\ V1g)\ V2x) = (ap\ V0f\ (ap\ V1g\ V2x))))))) \quad (7) \end{aligned}$$

Assume the following.

$$\begin{aligned} &\forall A.27a.nonempty\ A.27a \Rightarrow (\forall V0s \in (2^{A.27a}).(\forall V1t \in \\ &(2^{A.27a}).((V0s = V1t) \Leftrightarrow (\forall V2x \in A.27a.((p\ (ap\ (ap\ (c.2Ebool.2EIN \\ &A.27a)\ V2x)\ V0s)) \Leftrightarrow (p\ (ap\ (ap\ (c.2Ebool.2EIN\ A.27a)\ V2x)\ V1t))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\begin{aligned} &\forall A.27a.nonempty\ A.27a \Rightarrow \forall A.27b.nonempty\ A.27b \Rightarrow (\\ &\forall V0f \in (A.27b^{A.27a}).(\forall V1s \in (2^{A.27b}).(\forall V2x \in \\ &A.27a.((p\ (ap\ (ap\ (c.2Ebool.2EIN\ A.27a)\ V2x)\ (ap\ (ap\ (c.2Epred_set.2EPREIMAGE \\ &A.27a\ A.27b)\ V0f)\ V1s))) \Leftrightarrow (p\ (ap\ (ap\ (c.2Ebool.2EIN\ A.27b)\ (ap\ V0f \\ &V2x))\ V1s)))))) \quad (9) \end{aligned}$$

Theorem 1

$$\begin{aligned} &\forall A.27a.nonempty\ A.27a \Rightarrow \forall A.27b.nonempty\ A.27b \Rightarrow \forall A.27c. \\ &nonempty\ A.27c \Rightarrow (\forall V0f \in (A.27b^{A.27a}).(\forall V1g \in (A.27c^{A.27b}). \\ &(\forall V2s \in (2^{A.27c}).((ap\ (ap\ (c.2Epred_set.2EPREIMAGE\ A.27a \\ &A.27b)\ V0f)\ (ap\ (ap\ (c.2Epred_set.2EPREIMAGE\ A.27b\ A.27c)\ V1g) \\ &V2s)) = (ap\ (ap\ (c.2Epred_set.2EPREIMAGE\ A.27a\ A.27c)\ (ap\ (ap\ (\\ &c.2Ecombin.2Eo\ A.27a\ A.27c\ A.27b)\ V1g)\ V0f))\ V2s)))))) \end{aligned}$$