

l14_cqc_the2

(TMVinG36wycz6XZNNtroe2c1BZrtEoFTw)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $v2_cqc_the1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow ((v2_cqc_the1 (k8_cqc_lang X0 X1 (k8_cqc_lang \\ & \quad X0 X1 X2)) X0) \Rightarrow (v2_cqc_the1 (k8_cqc_lang X0 X1 X2) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow ((v2_cqc_the1 (k8_cqc_lang X0 (k7_cqc_lang \\ & \quad X0 X1 X2) X3) X0) \Rightarrow (v2_cqc_the1 (k8_cqc_lang X0 X1 (k8_cqc_lang X0 \\ & \quad X2 X3)) X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X4.(m2_subset_1 X4 (k9_qc_lang1 \\ & \quad X0) (k3_cqc_lang X0)) \Rightarrow (((v2_cqc_the1 (k8_cqc_lang X0 X1 X2) X0) \wedge \\ & \quad (v2_cqc_the1 (k8_cqc_lang X0 X3 X4) X0)) \Rightarrow (v2_cqc_the1 (k8_cqc_lang \\ & \quad X0 (k9_cqc_lang X0 X1 X3) (k9_cqc_lang X0 X2 X4)) X0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\
& \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\
& \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow ((v2_cqc_the1\ (k8_cqc_lang\ X0\ (k7_cqc_lang \\
& \quad X0\ X1\ X2)\ X1)\ X0) \wedge (v2_cqc_the1\ (k8_cqc_lang\ X0\ (k7_cqc_lang\ X0\ X1 \\
& \quad X2)\ X2)\ X0))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\
& \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1 \\
& \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X3.(m2_subset_1\ X3\ (k9_qc_lang1 \\
& \quad X0)\ (k3_cqc_lang\ X0)) \Rightarrow ((v2_cqc_the1\ (k8_cqc_lang\ X0\ X1\ X2)\ X0) \Rightarrow \\
& \quad (v2_cqc_the1\ (k8_cqc_lang\ X0\ (k9_cqc_lang\ X0\ X1\ X3)\ (k9_cqc_lang \\
& \quad X0\ X2\ X3))\ X0))))
\end{aligned}$$