

t39_valuat_1 (TMZdU- biLtcWgSQHjkbk5o2MH2FWQSiH21jEh)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_cqc_lang : \iota \Rightarrow \iota$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k2_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ & \forall X2.(m2_funct_2 X2 (k3_qc_lang1 X0) X1 (k2_valuat_1 X0 X1)) \Rightarrow \\ & (\forall X3.(m1_valuat_1 X3 X0 X1) \Rightarrow (r1_valuat_1 X0 X1 (k5_cqc_lang \\ & X0) X3 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m2_subset_1 (k5_cqc_lang X0) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ & \forall X2.(m1_valuat_1 X2 X0 X1) \Rightarrow (\forall X3.(m2_subset_1 X3 \\ & (k9_qc_lang1 X0) (k3_cqc_lang X0)) \Rightarrow ((r2_valuat_1 X0 X1 X2 X3) \Leftrightarrow \\ & (\forall X4.(m2_funct_2 X4 (k3_qc_lang1 X0) X1 (k2_valuat_1 X0 \\ & X1)) \Rightarrow (r1_valuat_1 X0 X1 X3 X2 X4)))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ & \forall X2.(m1_valuat_1 X2 X0 X1) \Rightarrow (r2_valuat_1 X0 X1 X2 (k5_cqc_lang \\ & X0)))) \end{aligned}$$