

t4_qc_lang2 (TMd- kKDusA3dpxJDmB4zvJnpraDeepPC2WD5)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k19_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_qc_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_qc_lang1 X0) \wedge ((m1_subset_1 X1 (k9_qc_lang1 X0)) \wedge (m1_subset_1 X2 (k9_qc_lang1 X0)))) \Rightarrow (m1_subset_1 (k14_qc_lang1 X0 X1 X2) (k9_qc_lang1 X0)) \quad (1)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow ((v4_qc_lang1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((X2 = k20_qc_lang1 X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k9_qc_lang1 X0)) \wedge (X1 = k14_qc_lang1 X0 X3 X2))))))) \quad (2)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow ((v4_qc_lang1 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((X2 = k19_qc_lang1 X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k9_qc_lang1 X0)) \wedge (X1 = k14_qc_lang1 X0 X2 X3))))))) \quad (3)$$

Assume the following.

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow ((v4_qc_lang1 X1 X0) \Leftrightarrow (\exists X2. (m1_subset_1 X2 (k9_qc_lang1 X0)) \wedge (\exists X3. (m1_subset_1 X3 (k9_qc_lang1 X0)) \wedge (X1 = k14_qc_lang1 X0 X2 X3)))))) \quad (4)$$

Theorem 1

$$\forall X0. (m1_qc_lang1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k9_qc_lang1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow ((k19_qc_lang1 X0 (k14_qc_lang1 X0 X1 X2) = X1) \wedge (k20_qc_lang1 X0 (k14_qc_lang1 X0 X1 X2) = X2))))))$$