

t5_compos_0
(TMTJZH8BfDy9uphjnpsKCw4ZmFPZakLxort)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge ((v1_compos_0 \\ & X0) \wedge ((v2_compos_0 X0) \wedge (v3_compos_0 X0)))) \wedge ((m1_subset_1 X1 \\ & X0) \wedge (v7_ordinal1 X2))) \Rightarrow (m1_subset_1 (k5_compos_0 X0 X1 X2) X0) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v1_xboole_0 X0) \wedge ((v1_compos_0 X0) \wedge ((v2_compos_0 \\ & X0) \wedge (v3_compos_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow ((X3 = k5_compos_0 \\ & X0 X1 X2) \Leftrightarrow ((k2_compos_0 X0 X3 = k2_compos_0 X0 X1) \wedge ((k2_xtuple_0 \\ & X3 = k2_xtuple_0 X1) \wedge (k5_xtuple_0 X3 = k7_valued_1 (k5_xtuple_0 \\ & X1) X2)))))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\ & ((v1_compos_0 X1) \wedge ((v2_compos_0 X1) \wedge (v3_compos_0 X1)))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 X1) \Rightarrow (k3_compos_0 X1 (k2_compos_0 X1 X2) = k3_compos_0 \\ & X1 (k2_compos_0 X1 (k5_compos_0 X1 X2 X0)))) \end{aligned}$$