

t10_compos_0
(TMPN3zkiXjqB4zr5L4LquyqcMv3wE1q6DBN)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_compos_0 : \iota \Rightarrow \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Let $k5_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ & (m1_subset_1 X1 (k1_compos_0 X0))) \Rightarrow ((\neg v1_xboole_0 (k3_compos_0 \\ & X0 X1)) \wedge (v4_funct_1 (k3_compos_0 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_compos_0 X0)) \Rightarrow (k3_compos_0 X0 X1 = ReplSep \\ & (toSet (\lambda X2 : \iota. m1_subset_1 X2 X0)) (\lambda X2 : \iota. k2_compos_0 \\ & X0 X2 = X1) (\lambda X2 : \iota. k5_xtuple_0 X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_compos_0 X0)) \Rightarrow (\exists X2. (m1_subset_1 X2 \\ & X0) \wedge (k2_compos_0 X0 X2 = X1))) \end{aligned}$$