

t3_finsub_1

(TMV82AcgeHBTv5GLJbcFUef9LjNST8F2nSm)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_finsub_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k2_finsub_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k1_finsub_1 X0 X1 X2 = k2_xboole_0 X1 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (m1_subset_1 (k2_finsub_1 X0 X1 X2) X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v4_finsub_1 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (m1_subset_1 (k1_finsub_1 X0 X1 X2) X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k5_xboole_0 X0 X1 = k2_xboole_0 (k4_xboole_0 X0 X1) (k4_xboole_0 X1 X0) \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X2) \wedge (v4_finsub_1 X2)) \Rightarrow (((m1_subset_1 X0 X2) \wedge (m1_subset_1 X1 X2)) \Rightarrow (m1_subset_1 (k5_xboole_0 X0 X1) X2))$$