

t5_finsub_1
(TMUrb1sLiawC4pKCaxCQQiZDDgh8woc5aBZ)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_finsub_1 : \iota \Rightarrow o$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0) \Rightarrow ((k5_xboole_0 X1 X2 \in X0) \wedge (k6_subset_1 \\ & X1 X2 \in X0)))) \Rightarrow (v4_finsub_1 X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k4_xboole_0 X0 X1 = k5_xboole_0 X0 (k3_xboole_0 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.k5_xboole_0 X0 X1 = k5_xboole_0 X1 X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0) \Rightarrow ((k5_xboole_0 X1 X2 \in X0) \wedge (k3_xboole_0 \\ & X1 X2 \in X0)))) \Rightarrow (v4_finsub_1 X0)) \end{aligned}$$