

t57_chain_1 (TMMHKUB- boYKwTnB5a62ZmY4Rbbx5ikU9imW)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_chain_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_chain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.k5_xboole_0 X0 \ k1_xboole_0 = X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v1_xboole_0 \\ X0) \wedge (m1_subset_1 X0 k5_numbers) \wedge ((m1_chain_1 X1 X0) \wedge ((m1_subset_1 \\ X2 k5_numbers) \wedge ((m1_subset_1 X3 (k1_zfmisc_1 (k4_chain_1 X0 X1 \\ X2)))) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k4_chain_1 X0 X1 X2)))))) \Rightarrow \\ (k7_chain_1 X0 X1 X2 X3 X4 = k5_xboole_0 X3 X4) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (6)$$

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (7)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_subset_1 X0 k1_numbers k5_numbers)) \Rightarrow \\ (\forall X1.(m1_chain_1 X1 X0) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers \\ k5_numbers) \Rightarrow (k5_chain_1 X0 X1 X2 = k1_xboole_0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_finset_1 X0) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ ((\neg v1_xboole_0 X1) \wedge (m2_subset_1 X1 k1_numbers k5_numbers)) \Rightarrow \\ (\forall X2.(m1_chain_1 X2 X1) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ (k4_chain_1 X1 X2 X0))) \Rightarrow (k7_chain_1 X1 X2 X0 X3 (k5_chain_1 X1 X2 \\ X0) = X3)))) \end{aligned}$$