

t17_chain_1 (TM- LXjbBR98ukHrmpE1nZe8KtxYhBNoF6Eeg)

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Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_chain_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1_zfmisc_1 (k2_tarski X0 X1)) \Leftrightarrow (X0 = X1) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_zfmisc_1 X0) \wedge ((v1_finset_1 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1. (m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow ((m2_chain_1 (k1_domain_1 \\ & k1_numbers k1_numbers X1 X2) X0) \Leftrightarrow ((X1 \in X0) \wedge ((X2 \in X0) \wedge ((\neg r1_xxreal_0 \\ & X2 X1) \wedge (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow (\neg (X3 \in X0) \wedge (\neg r1_xxreal_0 \\ & X3 X1) \wedge (\neg r1_xxreal_0 X2 X3)))))) \vee ((\neg r1_xxreal_0 \\ & X1 X2) \wedge (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow ((X3 \in X0) \Rightarrow ((r1_xxreal_0 \\ & X3 X1) \wedge (r1_xxreal_0 X2 X3)))))))))) \quad (5) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k7_domain_1 X0 X1 X2 = k2_tarski X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow(k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \quad (8)$$

Assume the following.

$$\exists X0.v1_xreal_0 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k2_tarski X0 X1) \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_zfmisc_1 X0) \wedge ((v1_finset_1 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 k1_numbers) \Rightarrow (\forall X4.(m1_subset_1 X4 k1_numbers) \Rightarrow ((X0 = \\ & k7_domain_1 k1_numbers X1 X2) \Rightarrow ((m2_chain_1 (k1_domain_1 k1_numbers \\ & k1_numbers X3 X4) X0) \Leftrightarrow (((X3 = X1) \wedge (X4 = X2)) \vee ((X3 = X2) \wedge (X4 = X1)))))))))) \end{aligned}$$