

t2_zf_fund1
(TMGqdYinidrfRC75yJwrSyMf8mBbBvBbh3)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v8_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_classes2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_classes2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_zf_fund1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. k2_tarski X0 X0 = k1_tarski X0 \quad (4)$$

Assume the following.

$$\forall X0. k3_tarski (k1_tarski X0) = X0 \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k5_classes2 X0 X1 X2 = k2_tarski X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\wedge(m1_subset_1 X1 X0))\Rightarrow(k3_classes2 X0 X1 = k3_tarski X1) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0)))\Rightarrow((v3_zf_fund1 X1 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 X0)\Rightarrow((X2 \in X1)\Rightarrow(k3_classes2 X0 X2 \in X1)))))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0)))\Rightarrow((v2_zf_fund1 X1 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.(m1_subset_1 X3 X0)\Rightarrow(((X2 \in X1)\wedge(X3 \in X1))\Rightarrow(k5_classes2 X0 X2 X3 \in X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0)))\Rightarrow((v8_zf_fund1 X1 X0)\Leftrightarrow((v1_zf_fund1 X1 X0)\wedge((v2_zf_fund1 X1 X0)\wedge((v3_zf_fund1 X1 X0)\wedge((v4_zf_fund1 X1 X0)\wedge((v5_zf_fund1 X1 X0)\wedge((v6_zf_fund1 X1 X0)\wedge(v7_zf_fund1 X1 X0)))))))))) \quad (10)$$

Theorem 1

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0)))\Rightarrow(\forall X2.\forall X3.(v8_zf_fund1 X1 X0)\Rightarrow(((X2 \in X1)\Rightarrow(k1_tarski X2 \in X1))\wedge(((k1_tarski X2 \in X1)\Rightarrow(X2 \in X1))\wedge((X3 \in X1)\Rightarrow(k3_tarski X3 \in X1))))))$$