

t42_arytm_3
(TMYPyvRTmCq4X9AKU5VJKsLrvuud1a3ejKs)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_arytm_3 : \iota \Rightarrow \iota$ be given. Let $k8_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_arytm_3 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k5_arytm_3 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg k4_tarski X0 X1 \in k4_ordinal1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \wedge ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1))) \Rightarrow (m1_subset_1 (k8_arytm_3 X0 X1) k5_arytm_3) \quad (4)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k5_arytm_3) \Rightarrow (m1_subset_1 (k7_arytm_3 X0) k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k5_arytm_3) \Rightarrow (m1_subset_1 (k6_arytm_3 X0) k4_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_ordinal1\ X0)\wedge(v7_ordinal1\ X0))\wedge((v3_ordinal1\ X1)\wedge(v7_ordinal1\ X1)))\Rightarrow(m1_subset_1\ (k4_arytm_3\ X0\ X1)\ k4_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k5_arytm_3)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k4_ordinal1)\Rightarrow(((X0\in k4_ordinal1)\Rightarrow((X1=k7_arytm_3\ X0)\Leftrightarrow(X1=np_1)))\wedge((\neg X0\in k4_ordinal1)\Rightarrow((X1=k7_arytm_3\ X0)\Leftrightarrow(\exists X2.((v3_ordinal1\ X2)\wedge(v7_ordinal1\ X2))\wedge(X0=k4_tarski\ X2\ X1)))))) \quad (8)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k5_arytm_3)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k4_ordinal1)\Rightarrow(((X0\in k4_ordinal1)\Rightarrow((X1=k6_arytm_3\ X0)\Leftrightarrow(X1=X0)))\wedge((\neg X0\in k4_ordinal1)\Rightarrow((X1=k6_arytm_3\ X0)\Leftrightarrow(\exists X2.((v3_ordinal1\ X2)\wedge(v7_ordinal1\ X2))\wedge(X0=k4_tarski\ X1\ X2)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski\ X0\ X1=k2_tarski\ (k2_tarski\ X0\ X1)\ (k1_tarski\ X0) \quad (10)$$

Assume the following.

$$\forall X0.((v3_ordinal1\ X0)\wedge(v7_ordinal1\ X0))\Rightarrow(\forall X1.((v3_ordinal1\ X1)\wedge(v7_ordinal1\ X1))\Rightarrow(((X1=k1_xboole_0)\Rightarrow(k8_arytm_3\ X0\ X1=k1_xboole_0))\wedge(((k4_arytm_3\ X1\ X0=np_1)\Rightarrow(k8_arytm_3\ X0\ X1=k4_arytm_3\ X0\ X1))\wedge(\neg(X1\neq k1_xboole_0)\wedge((k4_arytm_3\ X1\ X0\neq np_1)\wedge(k8_arytm_3\ X0\ X1\neq k4_tarski\ (k4_arytm_3\ X0\ X1)\ (k4_arytm_3\ X1\ X0)))))) \quad (11)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v3_ordinal1\ X0) \quad (14)$$

Theorem 1

$$\forall X0.((v3_ordinal1\ X0)\wedge(v7_ordinal1\ X0))\Rightarrow(\forall X1.((v3_ordinal1\ X1)\wedge(v7_ordinal1\ X1))\Rightarrow((X0\neq k1_xboole_0)\Rightarrow((k6_arytm_3\ (k8_arytm_3\ X1\ X0)=k4_arytm_3\ X1\ X0)\wedge(k7_arytm_3\ (k8_arytm_3\ X1\ X0)=k4_arytm_3\ X0\ X1))))$$