

t50_arytm_3
(TMbceUQcchBMwXErinzAQfB3LxzrpM3jG28)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_arytm_3 : \iota$ be given. Let $k9_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k11_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k8_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_arytm_3 : \iota \Rightarrow \iota$ be given. Let $k7_arytm_3 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((k11_ordinal2 np_1 X0 = X0) \wedge (k11_ordinal2 X0 np_1 = X0)) \quad (1)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_arytm_3) \Rightarrow (k8_arytm_3 (k6_arytm_3 X0) (k7_arytm_3 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (k11_ordinal2 k1_xboole_0 X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (k10_ordinal2 X0 k1_xboole_0 = X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \wedge ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1))) \Rightarrow (k9_ordinal3 X0 X1 = k11_ordinal2 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \wedge ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1))) \Rightarrow (k8_ordinal3 X0 X1 = k10_ordinal2 X0 X1) \quad (6)$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \quad (7)$$

Assume the following.

$$k1_xboole_0 \in k4_ordinal1 \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (9)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k5_arytm_3) \Rightarrow (m1_subset_1 \ (k7_arytm_3 \ X0) \ k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k5_arytm_3) \Rightarrow (m1_subset_1 \ (k6_arytm_3 \ X0) \ k4_ordinal1) \quad (12)$$

Assume the following.

$$m1_subset_1 \ k11_arytm_3 \ k5_arytm_3 \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ k5_arytm_3) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 \ k4_ordinal1) \Rightarrow (((X0 \in k4_ordinal1) \Rightarrow ((X1 = k7_arytm_3 \ X0) \Leftrightarrow (X1 = \\ & np_1))) \wedge ((\neg X0 \in k4_ordinal1) \Rightarrow ((X1 = k7_arytm_3 \ X0) \Leftrightarrow (\exists X2. \\ & ((v3_ordinal1 \ X2) \wedge (v7_ordinal1 \ X2)) \wedge (X0 = k4_tarski \ X2 \ X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ k5_arytm_3) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 \ k4_ordinal1) \Rightarrow (((X0 \in k4_ordinal1) \Rightarrow ((X1 = k6_arytm_3 \ X0) \Leftrightarrow (X1 = \\ & X0))) \wedge ((\neg X0 \in k4_ordinal1) \Rightarrow ((X1 = k6_arytm_3 \ X0) \Leftrightarrow (\exists X2. \\ & ((v3_ordinal1 \ X2) \wedge (v7_ordinal1 \ X2)) \wedge (X0 = k4_tarski \ X1 \ X2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ k5_arytm_3) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 \ k5_arytm_3) \Rightarrow (k9_arytm_3 \ X0 \ X1 = k8_arytm_3 \ (k8_ordinal3 \ (k9_ordinal3 \\ & (k6_arytm_3 \ X0) \ (k7_arytm_3 \ X1)) \ (k9_ordinal3 \ (k6_arytm_3 \ X1) \\ & (k7_arytm_3 \ X0))) \ (k9_ordinal3 \ (k7_arytm_3 \ X0) \ (k7_arytm_3 \ X1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_arytm_3)\wedge(m1_subset_1 X1 k5_arytm_3))\Rightarrow(k9_arytm_3 X0 X1 = k9_arytm_3 X1 X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_ordinal1 X0)\wedge(v7_ordinal1 X0))\wedge((v3_ordinal1 X1)\wedge(v7_ordinal1 X1)))\Rightarrow(k8_ordinal3 X0 X1 = k8_ordinal3 X1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v3_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v3_ordinal1 X1)) \quad (22)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_arytm_3)\Rightarrow(k9_arytm_3 X0 k11_arytm_3 = X0)$$