

t15_arytm_3
(TMHu63rc78fhQW6ABzm7WPRVJTjFf99tM9P)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r2_arytm_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((r2_arytm_3 X0 k1_xboole_0) \wedge (r2_arytm_3 np_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1)) \Rightarrow (((r2_arytm_3 X0 X1) \wedge (r2_arytm_3 X1 X0)) \Rightarrow (X0 = X1))) \quad (2)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v7_ordinal1 X0)) \Rightarrow (\forall X1. ((v3_ordinal1 X1) \wedge (v7_ordinal1 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 k4_ordinal1) \Rightarrow ((X2 = k3_arytm_3 X0 X1) \Leftrightarrow ((r2_arytm_3 X2 X0) \wedge (r2_arytm_3 X2 X1) \wedge (\forall X3.((v3_ordinal1 X3) \wedge (v7_ordinal1 X3)) \Rightarrow (((r2_arytm_3 X3 X0) \wedge (r2_arytm_3 X3 X1)) \Rightarrow (r2_arytm_3 X3 X2)))))))) \quad (4)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v3_ordinal1 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_ordinal1\ X0)\wedge(v7_ordinal1\ X0))\Rightarrow(\forall X1. \\ & ((v3_ordinal1\ X1)\wedge(v7_ordinal1\ X1))\Rightarrow((k3_arytm_3\ X0\ X1 = k1_xboole_0)\Rightarrow \\ & (X0 = k1_xboole_0))) \end{aligned}$$