

t12_arytm_2 (TMQfncJs- MyPYm3X9dBNnsNQTo5sNMSTwEB4)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_arytm_2 : \iota$ be given. Let $k8_arytm_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_arytm_3 : \iota$ be given. Let $k1_arytm_2 : \iota$ be given. Let $k6_arytm_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_arytm_2 : \iota \Rightarrow \iota$ be given. Let $k4_arytm_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_subset_1 X0 (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \Rightarrow \\ & (\forall X1. (m2_subset_1 X1 (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \Rightarrow \\ & (\forall X2. (m2_subset_1 X2 (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \Rightarrow \\ & (k6_arytm_2 X0 (k6_arytm_2 X1 X2) = k6_arytm_2 (k6_arytm_2 X0 X1) \\ & X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (m2_subset_1 X0 (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \Rightarrow (k3_arytm_2 (k4_arytm_2 X0) = X0) \quad (3)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 k1_arytm_2 \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k2_arytm_2) \wedge (m1_subset_1 X1 k2_arytm_2)) \Rightarrow (m1_subset_1 (k8_arytm_2 X0 X1) k2_arytm_2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_arytm_2)\wedge(m1_subset_1 X1 k1_arytm_2))\Rightarrow(m2_subset_1 (k6_arytm_2 X0 X1) (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_arytm_2)\Rightarrow(m2_subset_1 (k3_arytm_2 X0) (k1_zfmisc_1 k5_arytm_3) k1_arytm_2) \quad (8)$$

Assume the following.

$$m1_subset_1 k1_arytm_2 (k1_zfmisc_1 (k1_zfmisc_1 k5_arytm_3)) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_arytm_2)\Rightarrow(\forall X1.(m1_subset_1 X1 k2_arytm_2)\Rightarrow(k8_arytm_2 X0 X1 = k4_arytm_2 (k6_arytm_2 (k3_arytm_2 X0) (k3_arytm_2 X1)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k2_arytm_2)\wedge(m1_subset_1 X1 k2_arytm_2))\Rightarrow(k8_arytm_2 X0 X1 = k8_arytm_2 X1 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_arytm_2)\wedge(m1_subset_1 X1 k1_arytm_2))\Rightarrow(k6_arytm_2 X0 X1 = k6_arytm_2 X1 X0) \quad (12)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k2_arytm_2)\Rightarrow(\forall X1.(m1_subset_1 X1 k2_arytm_2)\Rightarrow(\forall X2.(m1_subset_1 X2 k2_arytm_2)\Rightarrow(k8_arytm_2 X0 (k8_arytm_2 X1 X2) = k8_arytm_2 (k8_arytm_2 X0 X1) X2)))$$