

t12_arytm_0
(TMQ7EdY4k8qy8r47KZhBDpik5PCbteKfBuZ)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_arytm_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_arytm_2 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $k8_arytm_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_arytm_3 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$r1_xboole_0 \ k2_arytm_2 \ (k2_zfmisc_1 \ (k1_tarski \ k11_arytm_3) \ k2_arytm_2) \quad (1)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k2_arytm_2) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ k2_arytm_2) \Rightarrow ((X0 = k11_arytm_3) \Rightarrow (k8_arytm_2 \ X0 \ X1 = k11_arytm_3))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(\neg(r1_xboole_0 \ X0 \ X1) \wedge (\forall X2.\neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 \ X0 \ X1)) \quad (3)$$

Assume the following.

$$(k11_arytm_3 \in k2_arytm_2) \wedge (k12_arytm_3 \in k2_arytm_2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 \ X0 \ X1) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (((\\
& X0 \in k2_arytm_2) \wedge (X1 \in k2_arytm_2) \Rightarrow ((X2 = k2_arytm_0 X0 X1) \Leftrightarrow (\exists X3. \\
& (m1_subset_1 X3 k2_arytm_2) \wedge (\exists X4.(m1_subset_1 X4 k2_arytm_2) \wedge \\
& ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k8_arytm_2 X3 X4)))))) \wedge (((X0 \in k2_arytm_2) \wedge \\
& (X1 \in k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2) \Rightarrow ((X0 = k6_numbers) \vee \\
& ((X2 = k2_arytm_0 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 k2_arytm_2) \wedge \\
& (\exists X4.(m1_subset_1 X4 k2_arytm_2) \wedge ((X0 = X3) \wedge ((X1 = k4_tarski \\
& k6_numbers X4) \wedge (X2 = k4_tarski k6_numbers (k8_arytm_2 X3 X4)))))) \wedge \\
& (((X1 \in k2_arytm_2) \wedge (X0 \in k2_zfmisc_1 (k1_tarski k6_numbers) \\
& k2_arytm_2) \Rightarrow ((X1 = k6_numbers) \vee ((X2 = k2_arytm_0 X0 X1) \Leftrightarrow (\exists X3. \\
& (m1_subset_1 X3 k2_arytm_2) \wedge (\exists X4.(m1_subset_1 X4 k2_arytm_2) \wedge \\
& ((X0 = k4_tarski k6_numbers X3) \wedge ((X1 = X4) \wedge (X2 = k4_tarski k6_numbers \\
& (k8_arytm_2 X4 X3)))))) \wedge (((X0 \in k2_zfmisc_1 (k1_tarski k6_numbers) \\
& k2_arytm_2) \wedge (X1 \in k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2) \Rightarrow \\
& ((X2 = k2_arytm_0 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 k2_arytm_2) \wedge \\
& (\exists X4.(m1_subset_1 X4 k2_arytm_2) \wedge ((X0 = k4_tarski k6_numbers \\
& X3) \wedge ((X1 = k4_tarski k6_numbers X4) \wedge (X2 = k8_arytm_2 X4 X3)))))) \wedge \\
& (\neg(\neg(X0 \in k2_arytm_2) \wedge (X1 \in k2_arytm_2)) \wedge (\neg(X0 \in k2_arytm_2) \wedge \\
& ((X1 \in k2_zfmisc_1 (k1_tarski k6_numbers) k2_arytm_2) \wedge (X0 \neq k6_numbers))) \wedge \\
& ((\neg(X1 \in k2_arytm_2) \wedge ((X0 \in k2_zfmisc_1 (k1_tarski k6_numbers) \\
& k2_arytm_2) \wedge (X1 \neq k6_numbers))) \wedge (\neg(X0 \in k2_zfmisc_1 (k1_tarski \\
& k6_numbers) k2_arytm_2) \wedge (X1 \in k2_zfmisc_1 (k1_tarski k6_numbers) \\
& k2_arytm_2) \wedge (\neg(X2 = k2_arytm_0 X0 X1) \Leftrightarrow (X2 = k6_numbers)))))))))) \\
& \tag{8}
\end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_numbers) \wedge (m1_subset_1 X1 k1_numbers)) \Rightarrow (k2_arytm_0 X0 X1 = k2_arytm_0 X1 X0) \tag{9}$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow ((X1 = k6_numbers) \Rightarrow (k2_arytm_0 X0 X1 = k6_numbers)))$$