

l16_arytm_2 (TM- duGfD9XNNSaSyxmrRJEyHYh34vZv71xbW)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_arytm_3 : \iota$ be given. Let $k1_arytm_2 : \iota$ be given. Let $r3_arytm_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k4_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (\neg X3 \in X1))) \quad (3)$$

Assume the following.

$$\begin{aligned} k1_arytm_2 = & k6_subset_1 (ReplSep (toset (\lambda X0 : \iota. m1_subset_1 \\ & X0 (k1_zfmisc_1 k5_arytm_3))) (\lambda X0 : \iota. \forall X1. (m1_subset_1 \\ & X1 k5_arytm_3) \Rightarrow ((X1 \in X0) \Rightarrow ((\forall X2. (m1_subset_1 X2 k5_arytm_3) \Rightarrow \\ & ((r3_arytm_3 X2 X1) \Rightarrow (X2 \in X0))) \wedge (\exists X2. (m1_subset_1 X2 k5_arytm_3) \wedge \\ & ((X2 \in X0) \wedge (\neg r3_arytm_3 X2 X1))))))) (\lambda X0 : \iota. X0)) (k1_tarski \\ & k5_arytm_3) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k5_arytm_3) \Rightarrow & (\forall X1. \neg (X1 \in k1_arytm_2) \wedge \\ ((X0 \in X1) \wedge (\forall X2. (m1_subset_1 X2 k5_arytm_3) \Rightarrow & (\neg (X2 \in X1) \wedge \\ (\neg r3_arytm_3 X2 X0)))))) \end{aligned}$$