

t84_arytm_3
(TML5NeYn2D5kgbdTxrW7SbxgXKj5KEoDmxt)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_arytm_3 : \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $k9_arytm_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_arytm_3) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_arytm_3) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_arytm_3) \Rightarrow ((k9_arytm_3 \\ X0 X1 = k9_arytm_3 X2 X1) \Rightarrow (X0 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_arytm_3) \Rightarrow (k9_arytm_3 X0 k11_arytm_3 = X0) \quad (2)$$

Assume the following.

$$m1_subset_1 k11_arytm_3 k5_arytm_3 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_arytm_3) \wedge (m1_subset_1 \\ X1 k5_arytm_3)) \Rightarrow (k9_arytm_3 X0 X1 = k9_arytm_3 X1 X0) \quad (4)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k5_arytm_3) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k5_arytm_3) \Rightarrow ((X0 = k11_arytm_3) \Leftrightarrow (k9_arytm_3 X0 X1 = X1)))$$