

t6_arytm_0 (TMGCD- CGqqBQ6G1wtu6YEiK9QV6tu1a6hjsxU)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_arytm_2 : \iota$ be given. Let $k2_arytm_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $r1_arytm_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_arytm_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_arytm_2) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_arytm_2) \Rightarrow (((r1_arytm_2 X0 X1) \wedge (k1_arytm_1 X1 X0 = k11_arytm_3)) \Rightarrow \\ (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k4_tarski X0 X1) \tag{3}$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_arytm_2) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_arytm_2) \Rightarrow (((r1_arytm_2 X1 X0) \Rightarrow (k2_arytm_1 X0 X1 = k1_arytm_1 \\ X0 X1)) \wedge ((\neg r1_arytm_2 X1 X0) \Rightarrow (k2_arytm_1 X0 X1 = k4_tarski k11_arytm_3 \\ (k1_arytm_1 X1 X0)))))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k2_arytm_2) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k2_arytm_2) \Rightarrow ((k2_arytm_1 X0 X1 = k11_arytm_3) \Rightarrow (X0 = X1))) \end{aligned}$$