t4_arytm_0 (TM-SLP8RzLXuSLuQfXCTcJrYXDXqGFi3fBsZ)

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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 $k1\_numbers : \iota$ 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 $k11\_arytm\_3 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k2\_arytm\_2) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k2\_arytm\_2) \Rightarrow (\neg(\neg r1\_arytm\_2\ X0\ X1) \wedge (k1\_arytm\_1\ X0\ X1 = k11\_arytm\_3))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k2\_arytm\_2) \Rightarrow ((X0 \neq k11\_arytm\_3) \Rightarrow (k4\_tarski\ k11\_arytm\_3\ X0 \in k1\_numbers)) \tag{3}$$

Assume the following.

$$r1\_tarski\ k2\_arytm\_2\ k1\_numbers \tag{4}$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_arytm\_2 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k2\_arytm\_2) \wedge (m1\_subset\_1\ X1\ k2\_arytm\_2)) \Rightarrow (m1\_subset\_1\ (k1\_arytm\_1\ X0\ X1)\ k2\_arytm\_2) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k2\_arytm\_2)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k2\_arytm\_2)\Rightarrow(((r1\_arytm\_2\ X1\ X0)\Rightarrow(k2\_arytm\_1\ X0\ X1 = k1\_arytm\_1\ X0\ X1))\wedge((\neg r1\_arytm\_2\ X1\ X0)\Rightarrow(k2\_arytm\_1\ X0\ X1 = k4\_tarski\ k11\_arytm\_3\ (k1\_arytm\_1\ X1\ X0)))))) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k2\_arytm\_2)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k2\_arytm\_2)\Rightarrow(k2\_arytm\_1\ X0\ X1 \in k1\_numbers))$$