t14_arytm_3 (TMSV9dzh9zNLutn5KMBVTmF2t7CvWwmTMjM)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k3\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k2\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.((v3\_ordinal1\ X0) \wedge (v7\_ordinal1\ X0)) \Rightarrow ((r2\_arytm\_3\ X0\ k1\_xboole\_0) \wedge (r2\_arytm\_3\ np\_\_1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\neg(v1\_xboole\_0\ X0) \wedge ((X0 \neq X1) \wedge (v1\_xboole\_0\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0) \wedge (v3\_ordinal1\ X1)) \Rightarrow (r2\_arytm\_3\ X0\ X0) \tag{5}$$

Assume the following.

$$\exists X0.v1\_xboole\_0\ X0 \tag{6}$$

Assume the following.

$$v1\_xboole\_0\ k1\_xboole\_0 \tag{7}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow(\forall X1.((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k4\_ordinal1)\Rightarrow((X2 = k3\_arytm\_3\ X0\ X1)\Leftrightarrow((r2\_arytm\_3\ X2\ X0)\wedge((r2\_arytm\_3\ X2\ X1)\wedge(\forall X3.((v3\_ordinal1\ X3)\wedge(v7\_ordinal1\ X3))\Rightarrow(((r2\_arytm\_3\ X3\ X0)\wedge(r2\_arytm\_3\ X3\ X1))\Rightarrow(r2\_arytm\_3\ X3\ X2)))))))) \tag{8}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow(\forall X1.((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k4\_ordinal1)\Rightarrow((X2 = k2\_arytm\_3\ X0\ X1)\Leftrightarrow((r2\_arytm\_3\ X0\ X2)\wedge((r2\_arytm\_3\ X1\ X2)\wedge(\forall X3.((v3\_ordinal1\ X3)\wedge(v7\_ordinal1\ X3))\Rightarrow(((r2\_arytm\_3\ X0\ X3)\wedge(r2\_arytm\_3\ X1\ X3))\Rightarrow(r2\_arytm\_3\ X2\ X3)))))))) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Leftrightarrow(X0 \in k4\_ordinal1) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v7\_ordinal1\ X0) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v3\_ordinal1\ X0) \tag{12}$$

Theorem 1

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\Rightarrow((k3\_arytm\_3\ X0\ k1\_xboole\_0 = X0)\wedge(k2\_arytm\_3\ X0\ k1\_xboole\_0 = k1\_xboole\_0))$$