t54_arytm_3 (TMN-qpC81TYmAxBtHALsG248RKJbNxuEoVnu)

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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 $k10\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $r1\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k6\_arytm\_3 : \iota \Rightarrow \iota$ be given. Let $k8\_arytm\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_arytm\_3 : \iota \Rightarrow \iota$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k11\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k4\_ordinal1) \Rightarrow ((r1\_arytm\_3\ X0\ X1) \Rightarrow ((X1 = k1\_xboole\_0) \vee ((k6\_arytm\_3\ (k8\_arytm\_3\ X0\ X1) = X0) \wedge (k7\_arytm\_3\ (k8\_arytm\_3\ X0\ X1) = X1))))) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0) \wedge (v7\_ordinal1\ X0)) \Rightarrow ((X0 \neq k1\_xboole\_0) \Rightarrow (k8\_arytm\_3\ X0\ X0 = np\_\_1)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow ((\neg(X0 \neq k1\_xboole\_0) \wedge (k6\_arytm\_3\ X0 = k1\_xboole\_0)) \wedge (\neg(k6\_arytm\_3\ X0 \neq k1\_xboole\_0) \wedge (X0 = k1\_xboole\_0))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (k7\_arytm\_3\ X0 \neq k1\_xboole\_0) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3) \Rightarrow (r1\_arytm\_3\ (k6\_arytm\_3\ X0)\ (k7\_arytm\_3\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow (\neg(k11\_ordinal2\ X0\ X1 = k1\_xboole\_0) \wedge ((X0 \neq k1\_xboole\_0) \wedge (X1 \neq k1\_xboole\_0)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow((r1\_arytm\_3\ X0\ X1)\Rightarrow(r1\_arytm\_3\ X1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\wedge((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1)))\Rightarrow(k9\_ordinal3\ X0\ X1 = k11\_ordinal2\ X0\ X1) \tag{8}$$

Assume the following.

$$k11\_arytm\_3 = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\wedge((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1)))\Rightarrow((v3\_ordinal1\ (k11\_ordinal2\ X0\ X1))\wedge(v7\_ordinal1\ (k11\_ordinal2\ X0\ X1))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\wedge((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1)))\Rightarrow(m1\_subset\_1\ (k8\_arytm\_3\ X0\ X1)\ k5\_arytm\_3) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3)\Rightarrow(m1\_subset\_1\ (k7\_arytm\_3\ X0)\ k4\_ordinal1) \tag{13}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3)\Rightarrow(m1\_subset\_1\ (k6\_arytm\_3\ X0)\ k4\_ordinal1) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow(v3\_ordinal1\ (k11\_ordinal2\ X0\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_arytm\_3)\Rightarrow(k10\_arytm\_3\ X0\ X1 = k8\_arytm\_3\ (k9\_ordinal3\ (k6\_arytm\_3\ X0)\ (k6\_arytm\_3\ X1))\ (k9\_ordinal3\ (k7\_arytm\_3\ X0)\ (k7\_arytm\_3\ X1)))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.(((v3\_ordinal1\ X0)\wedge(v7\_ordinal1\ X0))\wedge ((v3\_ordinal1\ X1)\wedge(v7\_ordinal1\ X1)))\Rightarrow(k9\_ordinal3\ X0\ X1 = k9\_ordinal3\ X1\ X0) \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v3\_ordinal1\ X1)) \tag{19}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_arytm\_3)\Rightarrow(\neg(X0\neq k11\_arytm\_3)\wedge (\forall X1.(m1\_subset\_1\ X1\ k5\_arytm\_3)\Rightarrow(k10\_arytm\_3\ X0\ X1\neq np\_\_1)))$$