t31_rlvect_4 (TMX4LnKQ6mqDongvrXoZhzwTVX35PnN9Nkk)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v5\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v6\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v7\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v8\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l1\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_rlvect\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge (l1\_rlvect\_1\ X0))))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((r1\_tarski\ X1\ X2) \wedge (v1\_rlvect\_3\ X2\ X0)) \Rightarrow (v1\_rlvect\_3\ X1\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.r1\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_enumset1\ X0\ X1\ X2) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v5\_rlvect\_1\ X2)\wedge((v6\_rlvect\_1\ X2)\wedge((v7\_rlvect\_1\ X2)\wedge((v8\_rlvect\_1\ X2)\wedge(l1\_rlvect\_1\ X2))))))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X2))\Rightarrow(\neg(X0\neq X1)\wedge(v1\_rlvect\_3\ (k7\_domain\_1\ (u1\_struct\_0\ X2)\ (k1\_rlvect\_1\ X2\ X3\ X0)\ (k1\_rlvect\_1\ X2\ X3\ X1))\ X2)))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge((m1\_subset\_1\ X2\ X0)\wedge(m1\_subset\_1\ X3\ X0))))\Rightarrow(k8\_domain\_1\ X0\ X1\ X2\ X3 = k1\_enumset1\ X1\ X2\ X3) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge(m1\_subset\_1\ X2\ X0)))\Rightarrow(k7\_domain\_1\ X0\ X1\ X2 = k2\_tarski\ X1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_rlvect\_1\ X0)\Rightarrow(l2\_algstr\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge((m1\_subset\_1\ X2\ X0)\wedge(m1\_subset\_1\ X3\ X0))))\Rightarrow(m1\_subset\_1\ (k8\_domain\_1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((m1\_subset\_1\ X1\ X0)\wedge(m1\_subset\_1\ X2\ X0)))\Rightarrow(m1\_subset\_1\ (k7\_domain\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_rlvect\_1\ X0))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(v1\_xreal\_0\ X2)))\Rightarrow(m1\_subset\_1\ (k1\_rlvect\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{13}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge((v5\_rlvect\_1\ X2)\wedge((v6\_rlvect\_1\ X2)\wedge((v7\_rlvect\_1\ X2)\wedge((v8\_rlvect\_1\ X2)\wedge(l1\_rlvect\_1\ X2))))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X2))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X2))\Rightarrow(\neg(X0\neq X1)\wedge(v1\_rlvect\_3\ (k8\_domain\_1\ (u1\_struct\_0\ X2)\ (k1\_rlvect\_1\ X2\ X3\ X0)\ (k1\_rlvect\_1\ X2\ X3\ X1)\ X4)\ X2))))))$$