t7_graphsp (TMXWFSBt7g8JxauEseA4XgG2kAgSouY5fVo)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_graph\_1 : \iota \Rightarrow o$ be given. Let $v7\_graph\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_graph\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r2\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_graph\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(r1\_tarski\ (k4\_xboole\_0\ X0\ X1)\ X2) \Rightarrow (r1\_tarski\ X0\ (k2\_xboole\_0\ X1\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.k4\_xboole\_0\ (k2\_xboole\_0\ X0\ X1)\ X1 = k4\_xboole\_0\ X0\ X1 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ (k4\_xboole\_0\ X0\ X1)\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v2\_struct\_0\ X2) \wedge (l1\_graph\_1\ X2)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X2)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X2)) \Rightarrow (\forall X5.((v7\_graph\_1\ X5\ X2) \wedge (m2\_graph\_1\ X5\ X2)) \Rightarrow (((r2\_graph\_5\ X2\ X3\ X4\ X5\ X0) \wedge (r1\_tarski\ X0\ X1)) \Rightarrow (r2\_graph\_5\ X2\ X3\ X4\ X5\ X1))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(k7\_subset\_1\ X0\ X1\ X2 = k4\_xboole\_0\ X1\ X2) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_graph\_1\ X0))\Rightarrow(\forall X1.\ (m2\_graph\_1\ X1\ X0)\Rightarrow(m2\_finseq\_1\ X1\ (u4\_struct\_0\ X0))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l1\_graph\_1\ X0))\wedge(m1\_finseq\_1\ X1\ (u4\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k2\_graph\_5\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(\neg X3 \in X1))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_graph\_1\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.((v7\_graph\_1\ X3\ X0)\wedge(m2\_graph\_1\ X3\ X0))\Rightarrow(\forall X4.(r2\_graph\_5\ X0\ X1\ X2\ X3\ X4)\Leftrightarrow((r1\_graph\_5\ X0\ X3\ X1\ X2)\wedge(r1\_tarski\ (k7\_subset\_1\ (u1\_struct\_0\ X0)\ (k2\_graph\_5\ X0\ X3)\ (k1\_tarski\ X2))\ X4)))))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \tag{11}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_graph\_1\ X0))\Rightarrow(\forall X1.\ ((v7\_graph\_1\ X1\ X0)\wedge(m2\_graph\_1\ X1\ X0))\Rightarrow(\forall X2.\forall X3.\ (m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow((r2\_graph\_5\ X0\ X3\ X4\ X1\ X2)\Leftrightarrow(r2\_graph\_5\ X0\ X3\ X4\ X1\ (k2\_xboole\_0\ X2\ (k1\_tarski\ X4))))))))$$