t10_abcmiz_0 (TMR7XaF6KjnuEd71kVtiXywRBiAjgtAUygD)

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Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $v5\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $l2\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $v9\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_abcmiz\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $k13\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v4\_finsub\_1 : \iota \Rightarrow o$ be given. Let $k3\_finsub\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $l1\_abcmiz\_0 : \iota \Rightarrow o$ be given. Let $u1\_abcmiz\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow ((X1 = k13\_lattice3\ X0\ X1\ X2) \Leftrightarrow (r1\_orders\_2\ X0\ X2\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ (k3\_xboole\_0\ X0\ X1)\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow ((r3\_orders\_2\ X0\ X1\ X2) \Leftrightarrow (r1\_orders\_2\ X0\ X1\ X2)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0\ X0) \wedge (v4\_finsub\_1\ X0)) \wedge ((m1\_subset\_1\ X1\ X0) \wedge (m1\_subset\_1\ X2\ X0))) \Rightarrow (k3\_finsub\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_zfmisc\_1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.v4\_finsub\_1\ (k1\_zfmisc\_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(l2\_abcmiz\_0\ X0)\Rightarrow((l1\_orders\_2\ X0)\wedge(l1\_abcmiz\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((l2\_abcmiz\_0\ X0)\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k2\_abcmiz\_0\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_abcmiz\_0\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(l2\_abcmiz\_0\ X0)))))\Rightarrow((v9\_abcmiz\_0\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k2\_abcmiz\_0\ X0\ (k13\_lattice3\ X0\ X1\ X2) = k3\_finsub\_1\ (k1\_zfmisc\_1\ (u1\_abcmiz\_0\ X0))\ (k2\_abcmiz\_0\ X0\ X1)\ (k2\_abcmiz\_0\ X0\ X2))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(k13\_lattice3\ X0\ X1\ X2 = k13\_lattice3\ X0\ X2\ X1) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{11}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(l2\_abcmiz\_0\ X0)))))\Rightarrow((v9\_abcmiz\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r3\_orders\_2\ X0\ X1\ X2)\Rightarrow(r1\_tarski\ (k2\_abcmiz\_0\ X0\ X2)\ (k2\_abcmiz\_0\ X0\ X1))))))$$