t9_yellow10 (TMctXPH-BzU54aXhhhJxGoHyVDZcL3X8kME5)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_lattice3\ X0\ (k1\_tarski\ X2)\ X1) \Rightarrow (r1\_orders\_2\ X0\ X1\ X2)) \wedge (((r1\_orders\_2\ X0\ X1\ X2) \Rightarrow (r1\_lattice3\ X0\ (k1\_tarski\ X2)\ X1)) \wedge (((r2\_lattice3\ X0\ (k1\_tarski\ X2)\ X1) \Rightarrow (r1\_orders\_2\ X0\ X2\ X1)) \wedge ((r1\_orders\_2\ X0\ X2\ X1) \Rightarrow (r2\_lattice3\ X0\ (k1\_tarski\ X2)\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_orders\_2\ X1)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))) \Rightarrow ((r1\_orders\_2\ (k3\_yellow\_3\ X0\ X1)\ X2\ X3) \Leftrightarrow ((r1\_orders\_2\ X0\ (k8\_yellow\_3\ X0\ X1\ X2)\ (k8\_yellow\_3\ X0\ X1\ X3)) \wedge (r1\_orders\_2\ X1\ (k9\_yellow\_3\ X0\ X1\ X2)\ (k9\_yellow\_3\ X0\ X1\ X3))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k6\_domain\_1\ X0\ X1 = k1\_tarski\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \wedge ((\neg v2\_struct\_0\ X1) \wedge (l1\_orders\_2\ X1))) \Rightarrow ((\neg v2\_struct\_0\ (k3\_yellow\_3\ X0\ X1)) \wedge (v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1)))))\Rightarrow(m1\_subset\_1\ (k9\_yellow\_3\ X0\ X1\ X2)\ (u1\_struct\_0\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1)))))\Rightarrow(m1\_subset\_1\ (k8\_yellow\_3\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0)\wedge(l1\_orders\_2\ X1))\Rightarrow((v1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))\wedge(l1\_orders\_2\ (k3\_yellow\_3\ X0\ X1))) \tag{9}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1)))\Rightarrow((r2\_lattice3\ (k3\_yellow\_3\ X0\ X1)\ (k6\_domain\_1\ (u1\_struct\_0\ (k3\_yellow\_3\ X0\ X1))\ X3)\ X2)\Leftrightarrow((r2\_lattice3\ X0\ (k6\_domain\_1\ (u1\_struct\_0\ X0)\ (k8\_yellow\_3\ X0\ X1\ X3))\ (k8\_yellow\_3\ X0\ X1\ X2))\wedge(r2\_lattice3\ X1\ (k6\_domain\_1\ (u1\_struct\_0\ X1)\ (k9\_yellow\_3\ X0\ X1\ X3))\ (k9\_yellow\_3\ X0\ X1\ X2)))))))$$