t54_waybel21 (TM-cXcA7UDgiUHKrzBjWRiy8pWBCXezFM85y)

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Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. 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 $v3\_waybel\_3 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $v2\_waybel19 : \iota \Rightarrow o$ be given. Let $l1\_waybel\_9 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_yellow\_0 : \iota \Rightarrow \iota$ be given. Let $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_waybel\_0 : \iota \Rightarrow o$ be given. Let $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_waybel11 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v3\_waybel\_3\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge ((v3\_lattice3\ X0) \wedge ((v2\_waybel19\ X0) \wedge (l1\_waybel\_9\ X0))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v4\_yellow\_0\ X1\ X0) \wedge (m1\_yellow\_0\ X1\ X0))) \Rightarrow ((\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v4\_orders\_2\ X2) \wedge ((v7\_waybel\_0\ X2) \wedge (l1\_waybel\_0\ X2\ X0)))) \Rightarrow ((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ X0)\ (u1\_waybel\_0\ X0\ X2))\ (u1\_struct\_0\ X1)) \Rightarrow (k1\_waybel11\ X0\ X2 \in u1\_struct\_0\ X1))) \Rightarrow (v4\_waybel\_0\ X1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v5\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow(((k4\_yellow\_0\ X0 \in u1\_struct\_0\ X1)\wedge(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v4\_orders\_2\ X2)\wedge((v7\_waybel\_0\ X2)\wedge(l1\_waybel\_0\ X2\ X0))))\Rightarrow((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ X0)\ (u1\_waybel\_0\ X0\ X2))\ (u1\_struct\_0\ X1))\Rightarrow(k1\_waybel11\ X0\ X2 \in u1\_struct\_0\ X1))))\Rightarrow(v7\_yellow\_0\ X1\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v7\_yellow\_0\ X1\ X0)\wedge((v4\_waybel\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0)))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v4\_orders\_2\ X2)\wedge((v7\_waybel\_0\ X2)\wedge(l1\_waybel\_0\ X2\ X0))))\Rightarrow((r1\_waybel\_0\ X0\ X2\ (u1\_struct\_0\ X1))\Rightarrow(k1\_waybel11\ X0\ X2 \in u1\_struct\_0\ X1)))) \tag{3}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v7\_yellow\_0\ X1\ X0)\wedge((v4\_waybel\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0)))))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge((X2 = u1\_struct\_0\ X1)\wedge(v4\_pre\_topc\ X2\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0)))\Rightarrow((\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge((X2 = u1\_struct\_0\ X1)\wedge(v4\_pre\_topc\ X2\ X0)))\Rightarrow(v4\_waybel\_0\ X1\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0))))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v5\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow((k4\_yellow\_0\ X0 \in u1\_struct\_0\ X1)\Rightarrow((\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\neg(X2 = u1\_struct\_0\ X1)\wedge(v4\_pre\_topc\ X2\ X0)))\vee(v7\_yellow\_0\ X1\ X0))))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_waybel\_0\ X1\ X0))\Rightarrow(\forall X2.(r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ X0)\ (u1\_waybel\_0\ X0\ X1))\ X2)\Rightarrow(r1\_waybel\_0\ X0\ X1\ X2))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_waybel\_9\ X0)\Rightarrow((l1\_pre\_topc\ X0)\wedge(l1\_orders\_2\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v2\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{10}$$

Theorem 1

$$\forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_waybel\_3\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v2\_waybel19\ X0)\wedge(l1\_waybel\_9\ X0)))))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v5\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((X2 = u1\_struct\_0\ X1)\wedge(k4\_yellow\_0\ X0 \in X2))\Rightarrow((v4\_pre\_topc\ X2\ X0)\Leftrightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v4\_orders\_2\ X3)\wedge((v7\_waybel\_0\ X3)\wedge(l1\_waybel\_0\ X3\ X0))))\Rightarrow((r1\_waybel\_0\ X0\ X3\ X2)\Rightarrow(k1\_waybel11\ X0\ X3 \in X2)))))))$$