t13_robbins3 (TMLZcaYitTS5QSYfKrY49sNfaWAxZe8ukdw)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $g3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_lattices : \iota \Rightarrow \iota$ be given. Let $u1\_lattices : \iota \Rightarrow \iota$ be given. Let $v9\_lattices : \iota \Rightarrow o$ be given. Let $k1\_lattice2 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_lattices : \iota \Rightarrow o$ be given. Let $l2\_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l3\_lattices\ X0) \Rightarrow (\forall X1.(l3\_lattices\ X1) \Rightarrow ((g3\_lattices\ (u1\_struct\_0\ X0)\ (u2\_lattices\ X0)\ (u1\_lattices\ X0) = g3\_lattices\ (u1\_struct\_0\ X1)\ (u2\_lattices\ X1)\ (u1\_lattices\ X1)) \Rightarrow (k1\_lattice2\ X0 = k1\_lattice2\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l3\_lattices\ X0)) \Rightarrow (\forall X1. ((\neg v2\_struct\_0\ X1) \wedge (l3\_lattices\ X1)) \Rightarrow ((g3\_lattices\ (u1\_struct\_0\ X0)\ (u2\_lattices\ X0)\ (u1\_lattices\ X0) = g3\_lattices\ (u1\_struct\_0\ X1)\ (u2\_lattices\ X1)\ (u1\_lattices\ X1)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1)) \Rightarrow (\forall X5. (m1\_subset\_1\ X5\ (u1\_struct\_0\ X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow ((k1\_lattices\ X0\ X2\ X3 = k1\_lattices\ X1\ X4\ X5) \wedge ((k2\_lattices\ X0\ X2\ X3 = k2\_lattices\ X1\ X4\ X5) \wedge (((r1\_lattices\ X0\ X2\ X3) \Rightarrow (r1\_lattices\ X1\ X4\ X5)) \wedge ((r1\_lattices\ X1\ X4\ X5) \Rightarrow (r1\_lattices\ X0\ X2\ X3)))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_lattices\ X0))\Rightarrow((u1\_struct\_0\ X0 = u1\_struct\_0\ (k1\_lattice2\ X0))\wedge((r1\_funct\_2\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k1\_lattice2\ X0))\ (u1\_struct\_0\ (k1\_lattice2\ X0)))\ (u1\_struct\_0\ (k1\_lattice2\ X0))\ (u2\_lattices\ X0)\ (u1\_lattices\ (k1\_lattice2\ X0)))\wedge(r1\_funct\_2\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k1\_lattice2\ X0))\ (u1\_struct\_0\ (k1\_lattice2\ X0)))\ (u1\_struct\_0\ (k1\_lattice2\ X0))\ (u1\_lattices\ X0)\ (u2\_lattices\ (k1\_lattice2\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.(l3\_lattices\ X0)\Rightarrow((l1\_lattices\ X0)\wedge(l2\_lattices\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l2\_lattices\ X0))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k1\_lattices\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_lattices\ X0))\Rightarrow((v9\_lattices\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k2\_lattices\ X0\ X1\ (k1\_lattices\ X0\ X1\ X2) = X1)))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l3\_lattices\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l3\_lattices\ X1))\Rightarrow(((g3\_lattices\ (u1\_struct\_0\ X0)\ (u2\_lattices\ X0)\ (u1\_lattices\ X0) = g3\_lattices\ (u1\_struct\_0\ X1)\ (u2\_lattices\ X1)\ (u1\_lattices\ X1))\wedge(v9\_lattices\ X0))\Rightarrow(v9\_lattices\ X1)))$$