t39_knaster (TMag6mHFmkxMKcozZqnM9MGCiqwryRqNFws)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v10\_lattices : \iota \Rightarrow o$ be given. Let $v4\_lattice3 : \iota \Rightarrow o$ be given. Let $l3\_lattices : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v14\_quantal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_knaster : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_lattices : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_knaster : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_knaster : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_abian : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_knaster : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v4\_lattice3\ X0) \wedge (l3\_lattices\ X0)))) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))))))) \Rightarrow ((\neg v2\_struct\_0\ (k8\_knaster\ X0\ X1)) \wedge ((v3\_lattices\ (k8\_knaster\ X0\ X1)) \wedge ((v10\_lattices\ (k8\_knaster\ X0\ X1)) \wedge (l3\_lattices\ (k8\_knaster\ X0\ X1)))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v10\_lattices\ X0) \wedge ((v4\_lattice3\ X0) \wedge (l3\_lattices\ X0)))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))) \Rightarrow ((v14\_quantal1\ X1\ X0) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v3\_lattices\ X2) \wedge ((v10\_lattices\ X2) \wedge (l3\_lattices\ X2)))) \Rightarrow ((X2 = k8\_knaster\ X0\ X1) \Leftrightarrow (\exists X3.((\neg v1\_xboole\_0\ X3) \wedge ((v2\_knaster\ X3\ X0) \wedge ((v3\_knaster\ X3\ X0) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))))) \wedge ((X3 = ReplSep\ (toset\ (\lambda X4 : \iota.m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)))\ (\lambda X4 : \iota.r2\_abian\ (u1\_struct\_0\ X0)\ X4\ X1)\ (\lambda X4 : \iota.X4)) \wedge (X2 = k7\_knaster\ X0\ X3))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge(l3\_lattices\ X0)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v2\_knaster\ X1\ X0)\wedge((v3\_knaster\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v3\_lattices\ X2)\wedge((v10\_lattices\ X2)\wedge(l3\_lattices\ X2))))\Rightarrow((X2 = k7\_knaster\ X0\ X1)\Leftrightarrow((u1\_struct\_0\ X2 = X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X2))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X2))\Rightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge(\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\wedge((X3 = X5)\wedge((X4 = X6)\wedge(((r3\_lattices\ X2\ X3\ X4)\Rightarrow(r3\_lattices\ X0\ X5\ X6))\wedge((r3\_lattices\ X0\ X5\ X6)\Rightarrow(r3\_lattices\ X2\ X3\ X4))))))))))))) \tag{3}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v10\_lattices\ X0)\wedge((v4\_lattice3\ X0)\wedge(l3\_lattices\ X0))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge((v14\_quantal1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k8\_knaster\ X0\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k8\_knaster\ X0\ X1)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(((X2 = X4)\wedge(X3 = X5))\Rightarrow((r3\_lattices\ (k8\_knaster\ X0\ X1)\ X2\ X3)\Leftrightarrow(r3\_lattices\ X0\ X4\ X5)))))))))$$