t20_modelc_1 (TMTvm9GggXDu1MvbkSBv2uGeEdigr5VhtoA)

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Let $v1\_modelc\_1 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k30\_modelc\_1 : \iota \Rightarrow \iota$ 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 $k18\_modelc\_1 : \iota$ be given. Let $u3\_modelc\_1 : \iota \Rightarrow \iota$ be given. Let $k48\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v10\_modelc\_1 : \iota \Rightarrow o$ be given. Let $l2\_modelc\_1 : \iota \Rightarrow o$ be given. Let $k24\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r3\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_modelc\_1\ X0) \wedge (m2\_finseq\_1\ X0\ k5\_numbers)) \Rightarrow (\forall X1.((v1\_modelc\_1\ X1) \wedge (m2\_finseq\_1\ X1\ k5\_numbers)) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v10\_modelc\_1\ X2) \wedge (l2\_modelc\_1\ X2))) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ k18\_modelc\_1\ (u3\_modelc\_1\ X2)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k18\_modelc\_1\ (u3\_modelc\_1\ X2)))))) \Rightarrow (k24\_modelc\_1\ X2\ X3\ (k8\_modelc\_1\ X0\ X1) = k2\_lattices\ X2\ (k24\_modelc\_1\ X2\ X3\ X0)\ (k24\_modelc\_1\ X2\ X3\ X1))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_partfun1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow (\forall X3.((\neg v1\_xboole\_0\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k30\_modelc\_1\ X0)))) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k48\_modelc\_1\ X0\ X1\ X3))) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k48\_modelc\_1\ X0\ X1\ X3))) \Rightarrow ((r3\_modelc\_1\ X0\ X1\ X3\ X2\ (k2\_lattices\ (k48\_modelc\_1\ X0\ X1\ X3)\ X4\ X5)) \Leftrightarrow ((r3\_modelc\_1\ X0\ X1\ X3\ X2\ X4) \wedge (r3\_modelc\_1\ X0\ X1\ X3\ X2\ X5)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_modelc\_1\ X0)\wedge(m1\_finseq\_1\ X0\ k5\_numbers))\wedge((v1\_modelc\_1\ X1)\wedge(m1\_finseq\_1\ X1\ k5\_numbers)))\Rightarrow(v1\_modelc\_1\ (k8\_modelc\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_partfun1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\wedge((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k30\_modelc\_1\ X0))))))\Rightarrow((\neg v2\_struct\_0\ (k48\_modelc\_1\ X0\ X1\ X2))\wedge(v10\_modelc\_1\ (k48\_modelc\_1\ X0\ X1\ X2))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_finseq\_1\ X0\ k5\_numbers)\wedge(m1\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(m2\_finseq\_1\ (k8\_modelc\_1\ X0\ X1)\ k5\_numbers) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_partfun1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\wedge((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k30\_modelc\_1\ X0))))))\Rightarrow(l2\_modelc\_1\ (k48\_modelc\_1\ X0\ X1\ X2)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v10\_modelc\_1\ X0)\wedge(l2\_modelc\_1\ X0)))\wedge(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k18\_modelc\_1\ (u3\_modelc\_1\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k18\_modelc\_1\ (u3\_modelc\_1\ X0))))))\wedge((v1\_modelc\_1\ X2)\wedge(m1\_finseq\_1\ X2\ k5\_numbers))))\Rightarrow(m1\_subset\_1\ (k24\_modelc\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_partfun1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow(\forall X2.((\neg v1\_xboole\_0\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k30\_modelc\_1\ X0))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k18\_modelc\_1\ (u3\_modelc\_1\ (k48\_modelc\_1\ X0\ X1\ X2)))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k18\_modelc\_1\ (u3\_modelc\_1\ (k48\_modelc\_1\ X0\ X1\ X2))))))))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ X0)\Rightarrow(\forall X5.((v1\_modelc\_1\ X5)\wedge(m2\_finseq\_1\ X5\ k5\_numbers))\Rightarrow((r4\_modelc\_1\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow(r3\_modelc\_1\ X0\ X1\ X2\ X4\ (k24\_modelc\_1\ (k48\_modelc\_1\ X0\ X1\ X2)\ X3\ X5))))))) \tag{9}$$

Theorem 1

$$\forall X0.((v1\_modelc\_1\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(\forall X1.((v1\_modelc\_1\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(\forall X2.(\neg v1\_xboole\_0\ X2)\Rightarrow(\forall X3.((v1\_partfun1\ X3\ X2)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X2))))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ X2)\Rightarrow(\forall X5.((\neg v1\_xboole\_0\ X5)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k30\_modelc\_1\ X2))))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ k18\_modelc\_1\ (u3\_modelc\_1\ (k48\_modelc\_1\ X2\ X3\ X5)))\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k18\_modelc\_1\ (u3\_modelc\_1\ (k48\_modelc\_1\ X2\ X3\ X5))))))\Rightarrow((r4\_modelc\_1\ X2\ X3\ X5\ X6\ X4\ (k8\_modelc\_1\ X0\ X1))\Leftrightarrow((r4\_modelc\_1\ X2\ X3\ X5\ X6\ X4\ X0)\wedge(r4\_modelc\_1\ X2\ X3\ X5\ X6\ X4\ X1)))))))))$$