t20_stacks_1 (TMbDJMsqFzTco7aaKSkDTjzzu4UZjhCjSdS)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v11\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_stacks\_1 : \iota \Rightarrow o$ be given. Let $v3\_stacks\_1 : \iota \Rightarrow o$ be given. Let $v4\_stacks\_1 : \iota \Rightarrow o$ be given. Let $v5\_stacks\_1 : \iota \Rightarrow o$ be given. Let $v6\_stacks\_1 : \iota \Rightarrow o$ be given. Let $l1\_stacks\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k7\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v11\_struct\_0\ X0) \wedge (l1\_stacks\_1\ X0)) \wedge (m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k6\_stacks\_1\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((\neg v11\_struct\_0\ X0) \wedge ((v2\_stacks\_1\ X0) \wedge ((v3\_stacks\_1\ X0) \wedge ((v4\_stacks\_1\ X0) \wedge ((v5\_stacks\_1\ X0) \wedge ((v6\_stacks\_1\ X0) \wedge (l1\_stacks\_1\ X0)))))))) \wedge (m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k11\_stacks\_1\ X0\ X1)\ (k1\_zfmisc\_1\ (u4\_struct\_0\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v11\_struct\_0\ X0) \wedge (l1\_stacks\_1\ X0))) \Rightarrow ((v3\_stacks\_1\ X0) \Leftrightarrow (\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0)) \Rightarrow ((\neg r1\_stacks\_1\ X0\ X1) \Rightarrow (X1 = k7\_stacks\_1\ X0\ (k5\_stacks\_1\ X0\ X1)\ (k6\_stacks\_1\ X0\ X1))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge((v2\_stacks\_1\ X0)\wedge((v3\_stacks\_1\ X0)\wedge((v4\_stacks\_1\ X0)\wedge((v5\_stacks\_1\ X0)\wedge((v6\_stacks\_1\ X0)\wedge(l1\_stacks\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u4\_struct\_0\ X0)))\Rightarrow((X2 = k11\_stacks\_1\ X0\ X1)\Leftrightarrow((X1 \in X2)\wedge((\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u4\_struct\_0\ X0))\Rightarrow((X4 \in X2)\Rightarrow((k7\_stacks\_1\ X0\ X4\ X3 \in X2)\wedge((\neg r1\_stacks\_1\ X0\ X4)\Rightarrow(k5\_stacks\_1\ X0\ X4 \in X2))))))\wedge(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u4\_struct\_0\ X0)))\Rightarrow(((X1 \in X3)\wedge(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u4\_struct\_0\ X0))\Rightarrow((X5 \in X3)\Rightarrow((k7\_stacks\_1\ X0\ X5\ X4 \in X3)\wedge((\neg r1\_stacks\_1\ X0\ X5)\Rightarrow(k5\_stacks\_1\ X0\ X5 \in X3)))))))\Rightarrow(r1\_tarski\ X2\ X3)))))))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge(l1\_stacks\_1\ X0)))\Rightarrow((v6\_stacks\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg r1\_stacks\_1\ X0\ (k7\_stacks\_1\ X0\ X1\ X2))))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge(l1\_stacks\_1\ X0)))\Rightarrow((v5\_stacks\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(X1 = k5\_stacks\_1\ X0\ (k7\_stacks\_1\ X0\ X1\ X2))))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge((v2\_stacks\_1\ X0)\wedge((v3\_stacks\_1\ X0)\wedge((v4\_stacks\_1\ X0)\wedge((v5\_stacks\_1\ X0)\wedge((v6\_stacks\_1\ X0)\wedge(l1\_stacks\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u4\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(((k7\_stacks\_1\ X0\ X1\ X3 \in k11\_stacks\_1\ X0\ X2)\Rightarrow(X1 \in k11\_stacks\_1\ X0\ X2))\wedge((k5\_stacks\_1\ X0\ X1 \in k11\_stacks\_1\ X0\ X2)\Rightarrow((r1\_stacks\_1\ X0\ X1)\vee(X1 \in k11\_stacks\_1\ X0\ X2)))))))$$