t6_stacks_1 (TMS6BQBW5yyZwj83ZC5Dwpvz2e9v3hDN9VY)

October 27, 2020

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 $r1\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $l5\_struct\_0 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ 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 $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_stacks\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ X0) \wedge (m1\_finseq\_1\ X2\ X0)) \Rightarrow (k1\_stacks\_1\ X0\ X1\ X2 = k7\_finseq\_1\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v11\_struct\_0\ X0)\wedge(l5\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u4\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Rightarrow(m2\_finseq\_1\ X2\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l5\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_stacks\_1\ X0)\Rightarrow(l5\_struct\_0\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge((v2\_stacks\_1\ X0)\wedge((v3\_stacks\_1\ X0)\wedge((v4\_stacks\_1\ X0)\wedge((v5\_stacks\_1\ X0)\wedge((v6\_stacks\_1\ X0)\wedge(l1\_stacks\_1\ X0))))))))\wedge(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0)))\Rightarrow(m2\_finseq\_2\ (k9\_stacks\_1\ X0\ X1)\ (u1\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v11\_struct\_0\ X0)\wedge(l1\_stacks\_1\ X0))\wedge(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k6\_stacks\_1\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v11\_struct\_0\ X0)\wedge(l1\_stacks\_1\ X0))\wedge(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k5\_stacks\_1\ X0\ X1)\ (u4\_struct\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(m1\_subset\_1\ (k3\_funct\_2\ X0\ X1\ X2\ X3)\ X1) \tag{12}$$

Assume the following.

$$\forall X0.m1\_finseq\_2\ (k3\_finseq\_2\ X0)\ X0 \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow (m2\_finseq\_1\ (k12\_finseq\_1\ X0\ X1)\ X0) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge(l1\_stacks\_1\ X0)))\Rightarrow((v3\_stacks\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow((\neg r1\_stacks\_1\ X0\ X1)\Rightarrow(X1 = k7\_stacks\_1\ X0\ (k5\_stacks\_1\ X0\ X1)\ (k6\_stacks\_1\ X0\ X1))))) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge((v2\_stacks\_1\ X0)\wedge((v3\_stacks\_1\ X0)\wedge((v4\_stacks\_1\ X0)\wedge((v5\_stacks\_1\ X0)\wedge((v6\_stacks\_1\ X0)\wedge(l1\_stacks\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ (u1\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))\Rightarrow((X2 = k9\_stacks\_1\ X0\ X1)\Leftrightarrow(\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))))\wedge((X2 = k3\_funct\_2\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ X3\ X1)\wedge((\forall X4.(m1\_subset\_1\ X4\ (u4\_struct\_0\ X0))\Rightarrow((r1\_stacks\_1\ X0\ X4)\Rightarrow(k3\_funct\_2\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ X3\ X4 = k1\_xboole\_0)))\wedge(\forall X4.(m1\_subset\_1\ X4\ (u4\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(k3\_funct\_2\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ X3\ (k7\_stacks\_1\ X0\ X4\ X5) = k7\_finseq\_1\ (k12\_finseq\_1\ (u1\_struct\_0\ X0)\ X5)\ (k3\_funct\_2\ (u4\_struct\_0\ X0)\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))\ X3\ X4)))))))))) \tag{16}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v11\_struct\_0\ X0)\wedge((v2\_stacks\_1\ X0)\wedge((v3\_stacks\_1\ X0)\wedge((v4\_stacks\_1\ X0)\wedge((v5\_stacks\_1\ X0)\wedge((v6\_stacks\_1\ X0)\wedge(l1\_stacks\_1\ X0)))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u4\_struct\_0\ X0))\Rightarrow((\neg r1\_stacks\_1\ X0\ X1)\Rightarrow(k9\_stacks\_1\ X0\ X1 = k1\_stacks\_1\ (u1\_struct\_0\ X0)\ (k12\_finseq\_1\ (u1\_struct\_0\ X0)\ (k6\_stacks\_1\ X0\ X1))\ (k9\_stacks\_1\ X0\ (k5\_stacks\_1\ X0\ X1)))))$$