

t8_stacks_1
(TMb7Mprshf8G55NwCdMyJbrqs6dwxN68dxL)

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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_stacks_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow ((\neg r1_stacks_1 X0 X1) \Rightarrow (k9_stacks_1 X0 X1 = \\ & k1_stacks_1 (u1_struct_0 X0) (k12_finseq_1 (u1_struct_0 X0) (\\ & k6_stacks_1 X0 X1)) (k9_stacks_1 X0 (k5_stacks_1 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 \\ & X0) \wedge (l1_stacks_1 X0))) \wedge ((m1_subset_1 X1 (u4_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k7_stacks_1 \\ & X0 X1 X2) (u4_struct_0 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow ((v6_stacks_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg r1_stacks_1 \\ & X0 (k7_stacks_1 X0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ & X0))) \Rightarrow ((v5_stacks_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X1 = k5_stacks_1 \\ & X0 (k7_stacks_1 X0 X1 X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 \\ X0))) \Rightarrow ((v4_stacks_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X2 = k6_stacks_1 \\ X0 (k7_stacks_1 X0 X1 X2))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow (k9_stacks_1 X0 (k7_stacks_1 X0 X1 X2) = k1_stacks_1 (u1_struct_0 \\ X0) (k12_finseq_1 (u1_struct_0 X0) X2) (k9_stacks_1 X0 X1)))) \end{aligned}$$