

t21_stacks_1

(TMGLP1znc65AXWXkZbQuaY3EuRmZTAVx5sS)

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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 $k11_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_stacks_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0))))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((k7_stacks_1 \\ & X0 X1 X3 \in k11_stacks_1 X0 X2) \Rightarrow (X1 \in k11_stacks_1 X0 X2)) \wedge ((k5_stacks_1 \\ & X0 X1 \in k11_stacks_1 X0 X2) \Rightarrow ((r1_stacks_1 X0 X1) \vee (X1 \in k11_stacks_1 \\ & X0 X2))))))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v11_struct_0 X0) \wedge (l1_stacks_1 X0)) \wedge \\ & (m1_subset_1 X1 (u4_struct_0 X0))) \Rightarrow (m1_subset_1 (k5_stacks_1 \\ & X0 X1) (u4_struct_0 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge \\ & ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 \\ & X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))) \wedge (m1_subset_1 \\ & X1 (u4_struct_0 X0))) \Rightarrow (m1_subset_1 (k11_stacks_1 X0 X1) (k1_zfmisc_1 \\ & (u4_struct_0 X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u4_struct_0 X0)) \Rightarrow ((X2 = k11_stacks_1 X0 X1) \Leftrightarrow ((X1 \in X2) \wedge ((\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (u4_struct_0 X0)) \Rightarrow ((X4 \in X2) \Rightarrow ((k7_stacks_1 X0 X4 X3 \in X2) \wedge ((\neg r1_stacks_1 \\ & X0 X4) \Rightarrow (k5_stacks_1 X0 X4 \in X2)))))) \wedge (\forall X3. (m1_subset_1 \\ & X3 (k1_zfmisc_1 (u4_struct_0 X0)) \Rightarrow (((X1 \in X3) \wedge (\forall X4. (m1_subset_1 \\ & X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. (m1_subset_1 X5 (u4_struct_0 \\ & X0)) \Rightarrow ((X5 \in X3) \Rightarrow ((k7_stacks_1 X0 X5 X4 \in X3) \wedge ((\neg r1_stacks_1 X0 X5) \Rightarrow \\ & (k5_stacks_1 X0 X5 \in X3)))))) \Rightarrow (r1_tarski X2 X3)))))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\ & X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\ & ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow ((X1 \in k11_stacks_1 X0 (k7_stacks_1 X0 X1 X2)) \wedge ((\neg r1_stacks_1 \\ & X0 X1) \Rightarrow (X1 \in k11_stacks_1 X0 (k5_stacks_1 X0 X1)))))) \end{aligned}$$