

t36_stacks_1

(TMXxn5ocg7fSEJ41f3DZb3rMphF74j5j3mZ)

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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 $k14_stacks_1 : \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_stacks_1 : \iota \Rightarrow \iota$ be given. Let $r1_stacks_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_stacks_1 : \iota \Rightarrow \iota$ be given. Let $r2_stacks_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_stacks_1 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k8_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_stacks_1 : \iota \Rightarrow \iota$ be given. Let $k3_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_stacks_1 : \iota \Rightarrow \iota$ be given. Let $k2_filter_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_stacks_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $m1_orders_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_stacks_1 : \iota \Rightarrow \iota$ be given. Let $k2_funct.7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\forall X3. (X3 \in X0) \Rightarrow ((k4_tarski X3 X1 \in X2) \Leftrightarrow (k6_eqrel_1 X0 X0 X2 X3 = k6_eqrel_1 X0 X0 X2 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_stacks_1 X0))) \Rightarrow (\neg(v2_stacks_1 X0) \wedge (\forall X1.(m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow (\neg r1_stacks_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow ((r1_stacks_1 X0 X1) \Rightarrow (k6_eqrel_1 (u4_struct_0 X0) (u4_struct_0 X0) (k10_stacks_1 X0) X1 = u1_stacks_1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 X0)) \Rightarrow ((r2_stacks_1 X0 X1 X2) \wedge (r1_stacks_1 X0 X1) \Rightarrow (r1_stacks_1 X0 X2)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \quad (8)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))) \Rightarrow ((v1_partfun1 (k10_stacks_1 X0) (u4_struct_0 X0)) \wedge ((v3_relat_2 (k10_stacks_1 X0)) \wedge (v8_relat_2 (k10_stacks_1 X0)))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_stacks_1 X0) \Rightarrow (m1_subset_1 (u1_stacks_1 X0) (k1_zfmisc_1 (u4_struct_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))))) \Rightarrow ((v1_stacks_1 (k14_stacks_1 X0)) \wedge (l1_stacks_1 (k14_stacks_1 X0))) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))))) \Rightarrow (m1_subset_1 (k10_stacks_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 X0) (u4_struct_0 X0)))) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (14)$$

Assume the following.

$$\forall X0. (l1_stacks_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow ((r1_stacks_1 X0 X1) \Leftrightarrow (X1 \in u1_stacks_1 X0))) \quad (15)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0)))))))))) \Rightarrow (\forall X1. ((v1_stacks_1 X1) \wedge (l1_stacks_1 X1)) \Rightarrow ((X1 = k14_stacks_1 X0) \Leftrightarrow ((u1_struct_0 X1 = u1_struct_0 X0) \wedge ((u4_struct_0 X1 = k8_eqrel_1 (u4_struct_0 X0) (k10_stacks_1 X0)) \wedge ((u1_stacks_1 X1 = k6_domain_1 (k1_zfmisc_1 (u4_struct_0 X0) (u1_stacks_1 X0)) \wedge ((u2_stacks_1 X1 = k3_stacks_1 (u1_struct_0 X0) (u4_struct_0 X0) (k10_stacks_1 X0) (u2_stacks_1 X0)) \wedge ((u3_stacks_1 X1 = k2_filter_1 (u4_struct_0 X0) (k10_stacks_1 X0) (k4_stacks_1 (u4_struct_0 X0) (u4_struct_0 X0) (u1_stacks_1 X0) (u1_stacks_1 X0) (u3_stacks_1 X0) (k6_partfun1 (u1_stacks_1 X0) (u1_stacks_1 X0) (u3_stacks_1 X0) (k8_eqrel_1 (u4_struct_0 X0) (k10_stacks_1 X0))) \Rightarrow (u4_stacks_1 X1 = k2_funct_7 (k1_partfun1 (k8_eqrel_1 (u4_struct_0 X0) (k10_stacks_1 X0)) (k3_tarski (k8_eqrel_1 (u4_struct_0 X0) (k10_stacks_1 X0))) (u4_struct_0 X0) (u1_struct_0 X0) X2 (u4_stacks_1 X0) (u1_stacks_1 X0) (the (\lambda X3 : \iota. m1_subset_1 X3 (u1_struct_0 X0)))))))))))))) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\
& X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\
& ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0))))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 X0) (u4_struct_0 X0)))) \Rightarrow \\
& ((X1 = k10_stacks_1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u4_struct_0 X0)) \Rightarrow ((k1_domain_1 \\
& (u4_struct_0 X0) (u4_struct_0 X0) X2 X3 \in X1) \Leftrightarrow (r2_stacks_1 X0 X2 \\
& X3))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\forall X0. \forall X1. k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v2_stacks_1 \\
& X0) \wedge ((v3_stacks_1 X0) \wedge ((v4_stacks_1 X0) \wedge ((v5_stacks_1 X0) \wedge \\
& ((v6_stacks_1 X0) \wedge (l1_stacks_1 X0))))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 \\
& (k14_stacks_1 X0))) \Rightarrow ((X2 = k6_eqrel_1 (u4_struct_0 X0) (u4_struct_0 \\
& X0) (k10_stacks_1 X0) X1) \Rightarrow ((r1_stacks_1 X0 X1) \Leftrightarrow (r1_stacks_1 (\\
& k14_stacks_1 X0) X2))))))
\end{aligned}$$