

t23_stacks_1

(TMQbWg56cjkHrHwcYL7VywrwNuoJRH92Pfi)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X0))) \Rightarrow (\forall X2. (m1_rewrite1 X2 X1) \Rightarrow ((k1_funct_1 \\ X2 np_1 \in X0) \Rightarrow (m2_finseq_1 X2 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v1_funct_1 \\ X0) \wedge (v1_finseq_1 X0)))) \Rightarrow ((np_1 \in k4_finseq_1 X0) \wedge (k3_finseq_1 \\ X0 \in k4_finseq_1 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$k1_card_1 k1_xboole_0 = k1_xboole_0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (\\ v1_funct_1 X1))) \Rightarrow (\forall X2. (X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\ X1 X2 \in X0)) \end{aligned} \quad (5)$$

Assume the following.

$$v1_xboole_0 \text{ np_}0 \quad (6)$$

Assume the following.

$$r1_xxreal_0 \text{ np_}0 \text{ np_}0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((v5_relat_1 X1 X0) \wedge (v1_finseq_1 X1)) \Rightarrow (m2_finseq_1 X1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_rewrite1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1)))) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((m1_rewrite1 X1 X0) \Leftrightarrow ((\neg r1_xxreal_0 (k3_finseq_1 X1) k6_numbers) \wedge (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow ((X2 \in k4_finseq_1 X1) \wedge (k2_nat_1 X2 \text{ np_}1 \in k4_finseq_1 X1)) \Rightarrow (k4_tarski (k1_funct_1 X1 X2) (k1_funct_1 X1 (k2_nat_1 X2 \text{ np_}1)) \in X0)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1.\neg X1 \in X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (17)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow (\forall X2.(m1_rewrite1 X2 X1) \Rightarrow ((k1_funct_1 X2 np_1 \in X0) \Leftrightarrow (v5_relat_1 X2 X0))))$$