

t15_hallmar1 (TMJsYniN- HJYViRQtXfW8iKdQCDB7hebmTkH)

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_hallmar1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_hallmar1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow ((X2 \in k4_finseq_1 \\ X1) \Rightarrow (k1_hallmar1 X0 X1 (k1_tarski X2) = k1_funct_1 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0.(k1_card_1 X0 = np_1) \Leftrightarrow (\exists X1.X0 = k1_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (5)$$

Assume the following.

$$k1_card_1 k1_xboole_0 = k1_xboole_0 \quad (6)$$

Assume the following.

$$v1_xboole_0 \text{ np_}0 \quad (7)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_}1 \text{ np_}0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\exists X1.(m1_finseq_1 X1 X0) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_xboole_0 X1) \wedge ((v1_finset_1 X1) \wedge (v1_finseq_1 X1)))))) \quad (12)$$

Assume the following.

$$\forall X0.v1_finset_1 (k1_tarski X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (14)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m1_subset_1 (k4_finseq_1 X0) (k1_zfmisc_1 k5_numbers)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v2_relat_1 X0) \Leftrightarrow (\neg k1_xboole_0 \in k10_xtuple_0 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 (k1_zfmisc_1 X0)) \Rightarrow ((v1_hallmar1 X1 X0) \Leftrightarrow (\forall X2.(v1_finset_1 X2) \Rightarrow ((r1_tarski X2 (k4_finseq_1 X1)) \Rightarrow (r1_xxreal_0 (k5_card_1 X2) (k5_card_1 (k1_hallmar1 X0 X1 X2))))))) \quad (17)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(X1 = k10_xtuple_0 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 X0 X3)))) \quad (18)$$

Theorem 1

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m2_finseq_1 X1 (k1_zfmisc_1 X0))) \Rightarrow ((v1_hallmar1 X1 X0) \Rightarrow (v2_relat_1 X1)))$$