

t44_dickson
(TMKoS2suvTS5jQhfmPXEWAdHJdfuhde57A2)

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Let $r4_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_dickson : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 = k4_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \quad (5)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (6)$$

Assume the following.

$$m1_subset_1 k10_dickson (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k5_numbers)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r4_relat_2 X0 X1) \Leftrightarrow (\forall X2. \forall X3. ((X2 \in X1) \wedge ((X3 \in X1) \wedge ((k4_tarski X2 X3 \in X0) \wedge (k4_tarski X3 X2 \in X0)))) \Rightarrow (X2 = X3))) \quad (8)$$

Assume the following.

$$\begin{aligned} k10_dickson = & \text{ReplSep2 (toset } (\lambda X0 : \iota.m1_subset_1 X0 k5_numbers)) \\ & (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 X1 k5_numbers)) (\\ & \lambda X0 : \iota.\lambda X1 : \iota.r1_xxreal_0 X0 X1) (\lambda X0 : \iota.\lambda X1 : \\ & \iota.k1_domain_1 k5_numbers k5_numbers X0 X1) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (11)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (12)$$

Theorem 1 $r4_relat_2 k10_dickson k5_numbers$.