

t43_dickson (TMKRegKXB- Vmz3Sg45EBKrzarpimLLPPnxaz)

October 27, 2020

Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_dickson : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (3)$$

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.

$$\exists X0. v1_xxreal_0 X0 \quad (6)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (7)$$

Assume the following.

$$m1_subset_1 \ k10_dickson \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k5_numbers)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski \ X0 \ X1 = k2_tarski \ (k2_tarski \ X0 \ X1) \ (k1_tarski \ X0) \quad (9)$$

Assume the following.

$$\forall X0. (v1_relat_1 \ X0) \Rightarrow (\forall X1. (r1_relat_2 \ X0 \ X1) \Leftrightarrow (\forall X2. (X2 \in X1) \Rightarrow (k4_tarski \ X2 \ X2 \in X0))) \quad (10)$$

Assume the following.

$$k10_dickson = ReplSep2 \ (toset \ (\lambda X0 : \iota. m1_subset_1 \ X0 \ k5_numbers)) \ (\ (\lambda X0 : \iota. toset \ (\lambda X1 : \iota. m1_subset_1 \ X1 \ k5_numbers)) \ (\ (\lambda X0 : \iota. \lambda X1 : \iota. r1_xxreal_0 \ X0 \ X1) \ (\lambda X0 : \iota. \lambda X1 : \iota. k1_domain_1 \ k5_numbers \ k5_numbers \ X0 \ X1)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski \ X0 \ X1 = k2_tarski \ X1 \ X0 \quad (12)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (14)$$

Assume the following.

$$\forall X0. (v6_membered \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ X0) \Rightarrow (v7_ordinal1 \ X1)) \quad (15)$$

Theorem 1 $r1_relat_2 \ k10_dickson \ k5_numbers$.