

t5_int_6 (TMN-
PEa7JxQF39rdqBaEANUbFVt15isXyUEc)

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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 $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarSKI : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xxreal_0 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow (((k1_nat_1 X0 np_1 \in k4_finseq_1 X1) \wedge (X2 = k5_relat_1 X1 (k2_finseq_1 X0))) \Rightarrow (k5_relat_1 X1 (k2_finseq_1 (k1_nat_1 X0 np_1)) = k7_finseq_1 X2 (k9_finseq_1 (k1_funct_1 X1 (k1_nat_1 X0 np_1))))))) \quad (2)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xreal_0 (k3_finseq_1 X0) \\ X1) \Rightarrow (k1_nat_1 X1 \text{ np_1} \in k4_finseq_1 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (8)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1 X0) \wedge (m1_subset_1 X1 k5_numbers)) \Rightarrow \\ (m2_subset_1 (k1_nat_1 X0 X1) k1_numbers k5_numbers) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1 X0) \wedge ((v1_relat_1 X1) \wedge ((\\ v1_funct_1 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow ((v1_relat_1 (k16_finseq_1 \\ X0 X1)) \wedge ((v1_funct_1 (k16_finseq_1 X0 X1)) \wedge (v1_finseq_1 (k16_finseq_1 \\ X0 X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (13)$$

Assume the following.

$$\forall X0.k5_finseq_1 X0 = k1_tarski (k4_tarski \text{ np_1} X0) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (k16_finseq_1 X0 X1 = k5_relat_1 \\ X1 (k2_finseq_1 X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 \\ & X0)\wedge(v1_valued_0 X0))))\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow((r1_xxreal_0 \\ & (k1_nat_1 X1 np_1) (k3_finseq_1 X0))\Rightarrow(k7_finseq_1 (k16_finseq_1 \\ & X1 X0) (k9_finseq_1 (k1_funct_1 X0 (k1_nat_1 X1 np_1))) = k16_finseq_1 \\ & (k1_nat_1 X1 np_1) X0))) \end{aligned}$$