

t8_rewrite3 (TM-
cZV8N5LNZ64ate1M9bHoUbiDuVMnYshqR)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $m1_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))))) \quad (2)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (4)$$

Assume the following.

$$k2_xcmplx_0 np_1 np_1 = np_2 \quad (5)$$

Assume the following.

$$r1_xxreal_0 \ np_2 \ np_2 \tag{6}$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_2 \tag{7}$$

Assume the following.

$$r1_xxreal_0 \ np_1 \ np_1 \tag{8}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{9}$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1.((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \ X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \tag{11}$$

Assume the following.

$$\forall X0. \forall X1.((v1_relat_1 \ X1) \wedge (v4_relat_1 \ X1 \ X0)) \Rightarrow (k1_relset_1 \ X0 \ X1 = k9_xtuple_0 \ X1) \tag{12}$$

Assume the following.

$$\forall X0. \forall X1.(v1_relat_1 \ (k10_finseq_1 \ X0 \ X1)) \wedge (v1_funct_1 \ (k10_finseq_1 \ X0 \ X1)) \tag{13}$$

Assume the following.

$$v6_membered \ k4_ordinal1 \tag{14}$$

Assume the following.

$$\forall X0. \forall X1.v1_finseq_1 \ (k10_finseq_1 \ X0 \ X1) \tag{15}$$

Assume the following.

$$\forall X0.(v1_relat_1 \ X0) \Rightarrow (\forall X1.(m1_rewrite1 \ X1 \ X0) \Rightarrow ((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1)))) \tag{16}$$

Assume the following.

$$\forall X0. \forall X1.k4_tarski \ X0 \ X1 = k2_tarski \ (k2_tarski \ X0 \ X1) \ (k1_tarski \ X0) \tag{17}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((m1_rewrite1 X1 X0) \Leftrightarrow ((\neg r1_xreal_0 \\ (k3_finseq_1 X1) k6_numbers) \wedge (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow \\ ((X2 \in k4_finseq_1 X1) \wedge (k2_nat_1 X2 np_1 \in k4_finseq_1 X1)) \Rightarrow (\\ k4_tarski (k1_funct_1 X1 X2) (k1_funct_1 X1 (k2_nat_1 X2 np_1)) \in \\ X0)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge \\ (v1_finseq_1 X0)))) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (21)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((m1_rewrite1 \\ (k10_finseq_1 X0 X1) X2) \Rightarrow (k4_tarski X0 X1 \in X2))$$