

t4_rewrite2 (TM- MAKNr1HDynReLWyKvqmThBYZnCqhDRNPd)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $m1_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((r1_xxreal_0 X0 (k3_finseq_1 X1)) \Rightarrow (k3_finseq_1 (k16_finseq_1 X0 X1) = X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow (\forall X2.(m1_rewrite1 X2 X1) \Rightarrow ((r1_xxreal_0 np_1 X0) \Rightarrow (m1_rewrite1 (k16_finseq_1 X0 X2) X1)))) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k1_funct_1 (k16_finseq_1 X1 X2) X0 = k1_funct_1 X2 X0)))) \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (r1_xxreal_0 \ X0 \ X0) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow (k4_finseq_1 \ X0 = k9_xtuple_0 \ X0) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X1) \wedge (v4_relat_1 \ X1 \ X0)) \Rightarrow (k1_relset_1 \ X0 \ X1 = k9_xtuple_0 \ X1) \quad (9)$$

Assume the following.

$$\forall X0. (v1_relat_1 \ X0) \Rightarrow (\forall X1. (m1_rewrite1 \ X1 \ X0) \Rightarrow ((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1)))) \quad (10)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & ((v1_relat_1 \ X0) \wedge ((v4_relat_1 \ X0 \ k5_numbers) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0)))) \end{aligned} \quad (12)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow (\forall X1. (v1_relat_1 \ X1) \Rightarrow (\forall X2. \\ & (m1_rewrite1 \ X2 \ X1) \Rightarrow (\neg (X0 \in k4_finseq_1 \ X2) \wedge (\forall X3. (m1_rewrite1 \\ & X3 \ X1) \Rightarrow (\neg (k3_finseq_1 \ X3 = X0) \wedge ((k1_funct_1 \ X3 \ np_1 = k1_funct_1 \\ & X2 \ np_1) \wedge (k1_funct_1 \ X3 \ (k3_finseq_1 \ X3) = k1_funct_1 \ X2 \ X0))))))) \end{aligned}$$