

t21_finseq_2
(TMKSaCTSJfEmNygaSMqqc2d6bvhwFzFp7ee)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. 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 $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow (((X1 = k5_relat_1 X2 \\ (k2_finseq_1 X0)) \wedge (r1_xxreal_0 (k3_finseq_1 X2) X0)) \Rightarrow (X2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow (((r1_xxreal_0 X0 (\\ k3_finseq_1 X1)) \wedge (X2 = k5_relat_1 X1 (k2_finseq_1 X0))) \Rightarrow ((k3_finseq_1 \\ X2 = X0) \wedge (k4_finseq_1 X2 = k2_finseq_1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (k3_xxreal_0 X0 X1 = X0)) \wedge ((\neg r1_xxreal_0 X0 X1) \Rightarrow (k3_xxreal_0 X0 X1 = X1)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (11)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2)))) \Rightarrow ((X1 = k5_relat_1 X2) \wedge ((k2_finseq_1 X0) \Rightarrow (k3_finseq_1 X1 = k3_xxreal_0 X0 (k3_finseq_1 X2))))))$$