

t16_finseq_1
(TMT4Lfax3egcm82DR2ZiSMVjwogtCzhcBPQ)

October 27, 2020

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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski (k10_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k3_relat_1 X0 X1) = k9_xtuple_0 X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \wedge ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \Rightarrow ((v1_relat_1 (k3_relat_1 X0 X1)) \wedge (v1_funct_1 (k3_relat_1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k3_relat_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v1_finseq_1 X0) \Leftrightarrow (\exists X1.(v7_ordinal1 X1) \wedge (k9_xtuple_0 X0 = k2_finseq_1 X1))) \quad (4)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((r1_tarski (k10_xtuple_0 X1) (k9_xtuple_0 X0)) \Rightarrow ((v1_relat_1 (k3_relat_1 X1 X0)) \wedge ((v1_funct_1 (k3_relat_1 X1 X0)) \wedge (v1_finseq_1 (k3_relat_1 X1 X0)))))))$$