

t32_zf_lang1
(TMNABe7nYWjf316yfDLmLRwyBiDQUdMUWKR)

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Let $v1_zf_lang : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k21_zf_lang : \iota \Rightarrow \iota$ be given. Let $k12_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k22_zf_lang : \iota \Rightarrow \iota$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((k21_zf_lang \\ & (k7_zf_lang X0 X1) = X0) \wedge (k22_zf_lang (k7_zf_lang X0 X1) = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_zf_lang X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\ & ((v1_zf_lang X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow ((v1_zf_lang \\ & (k11_zf_lang X0 X1)) \wedge (m2_finseq_1 (k11_zf_lang X0 X1) k5_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (k12_zf_lang \\ & X0 X1 = k7_zf_lang (k11_zf_lang X0 X1) (k11_zf_lang X1 X0))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((k21_zf_lang \\ & (k12_zf_lang X0 X1) = k11_zf_lang X0 X1) \wedge (k22_zf_lang (k12_zf_lang \\ & X0 X1) = k11_zf_lang X1 X0))) \end{aligned}$$