

t30_zf_lang1 (TMJVotitdDCFKGYBT-
FjwUA4upYgZQ2Yivka)

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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 $k20_zf_lang : \iota \Rightarrow \iota$ be given. Let $k10_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_zf_lang : \iota \Rightarrow \iota$ be given. Let $k25_zf_lang : \iota \Rightarrow \iota$ be given. Let $k26_zf_lang : \iota \Rightarrow \iota$ be given. Let $k11_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ & ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((k25_zf_lang \\ & (k11_zf_lang X0 X1) = X0) \wedge (k26_zf_lang (k11_zf_lang X0 X1) = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (k20_zf_lang (k6_zf_lang X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_zf_lang X0) \wedge (m1_finseq_1 X0 k5_numbers)) \wedge \\ & ((v1_zf_lang X1) \wedge (m1_finseq_1 X1 k5_numbers))) \Rightarrow (v1_zf_lang \\ & (k7_zf_lang X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.((v1_zf_lang X0) \wedge (m1_finseq_1 X0 k5_numbers)) \Rightarrow (v1_zf_lang (k6_zf_lang X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 k5_numbers) \wedge (m1_finseq_1 X1 k5_numbers)) \Rightarrow (m2_finseq_1 (k7_zf_lang X0 X1) k5_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k5_numbers) \Rightarrow (m2_finseq_1 (k6_zf_lang X0) k5_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (k11_zf_lang \\ X0 X1 = k6_zf_lang (k7_zf_lang X0 (k6_zf_lang X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (k10_zf_lang \\ X0 X1 = k6_zf_lang (k7_zf_lang (k6_zf_lang X0) (k6_zf_lang X1)))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_zf_lang X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\forall X1. \\ ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((k20_zf_lang \\ (k10_zf_lang X0 X1) = k7_zf_lang (k6_zf_lang X0) (k6_zf_lang X1)) \wedge \\ ((k25_zf_lang (k10_zf_lang X0 X1) = k6_zf_lang X0) \wedge (k26_zf_lang \\ (k10_zf_lang X0 X1) = X1)))) \end{aligned}$$