

# t23\_zf\_lang1 (TMQhXZTCXYMBAT- VmLL7UuAWuQWm4ckdSZwT)

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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  $v8\_zf\_lang : \iota \Rightarrow o$  be given. Let  $k21\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k20\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k7\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k22\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k10\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_zf\_lang : \iota \Rightarrow \iota$  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.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & v8\_zf\_lang X0) \Rightarrow (X0 = k10\_zf\_lang (k21\_zf\_lang X0) (k22\_zf\_lang \\ & X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (k20\_zf\_lang \\ & (k6\_zf\_lang X0) = X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \wedge \\ & ((v1\_zf\_lang X1) \wedge (m1\_finseq\_1 X1 k5\_numbers))) \Rightarrow (v1\_zf\_lang \\ & (k7\_zf\_lang X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \Rightarrow (v1\_zf\_lang \\ & (k6\_zf\_lang X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_finseq\_1 X0 k5\_numbers)\wedge(m1\_finseq\_1 X1 k5\_numbers))\Rightarrow(m2\_finseq\_1 (k7\_zf\_lang X0 X1) k5\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k5\_numbers)\Rightarrow(m2\_finseq\_1 (k6\_zf\_lang X0) k5\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0)\wedge(m1\_finseq\_1 X0 k5\_numbers))\Rightarrow((v1\_zf\_lang (k22\_zf\_lang X0))\wedge(m2\_finseq\_1 (k22\_zf\_lang X0) k5\_numbers)) \quad (9)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0)\wedge(m1\_finseq\_1 X0 k5\_numbers))\Rightarrow((v1\_zf\_lang (k21\_zf\_lang X0))\wedge(m2\_finseq\_1 (k21\_zf\_lang X0) k5\_numbers)) \quad (10)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0)\wedge(m2\_finseq\_1 X0 k5\_numbers))\Rightarrow(\forall X1.((v1\_zf\_lang X1)\wedge(m2\_finseq\_1 X1 k5\_numbers))\Rightarrow(k10\_zf\_lang X0 X1 = k6\_zf\_lang (k7\_zf\_lang (k6\_zf\_lang X0) (k6\_zf\_lang X1)))) \quad (11)$$

**Theorem 1**

$$\forall X0.((v1\_zf\_lang X0)\wedge(m2\_finseq\_1 X0 k5\_numbers))\Rightarrow((v8\_zf\_lang X0)\Rightarrow(k21\_zf\_lang X0 = k20\_zf\_lang (k21\_zf\_lang (k20\_zf\_lang X0))))$$