

# t34\_zf\_lang1

## (TMKguytLV2MmDP9stvFPckr17STsaFrhpM1)

October 27, 2020

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  $v9\_zf\_lang : \iota \Rightarrow o$  be given. Let  $v4\_zf\_lang : \iota \Rightarrow o$  be given. Let  $v5\_zf\_lang : \iota \Rightarrow o$  be given. Let  $k20\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k21\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k22\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k7\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow ((k21\_zf\_lang \\ & (k7\_zf\_lang X0 X1) = X0) \wedge (k22\_zf\_lang (k7\_zf\_lang X0 X1) = X1))) \end{aligned} \quad (1)$$

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.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow ((k20\_zf\_lang \\ & (k10\_zf\_lang X0 X1) = k7\_zf\_lang (k6\_zf\_lang X0) (k6\_zf\_lang X1)) \wedge \\ & ((k25\_zf\_lang (k10\_zf\_lang X0 X1) = k6\_zf\_lang X0) \wedge (k26\_zf\_lang \\ & (k10\_zf\_lang X0 X1) = X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & v9\_zf\_lang X0) \Rightarrow (k25\_zf\_lang X0 = k21\_zf\_lang (k20\_zf\_lang X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v8\_zf\_lang X0) \Rightarrow (k22\_zf\_lang X0 = k20\_zf\_lang (k22\_zf\_lang (k20\_zf\_lang X0)))) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v8\_zf\_lang X0) \Rightarrow (k21\_zf\_lang X0 = k20\_zf\_lang (k21\_zf\_lang (k20\_zf\_lang X0)))) \quad (7)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow (k10\_zf\_lang X0 X1 = k11\_zf\_lang (k6\_zf\_lang X0) X1)) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (9)$$

Assume the following.

$$\forall X0. ((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \Rightarrow (v1\_zf\_lang (k6\_zf\_lang X0)) \quad (10)$$

Assume the following.

$$\forall X0. (m1\_finseq\_1 X0 k5\_numbers) \Rightarrow (m2\_finseq\_1 (k6\_zf\_lang X0) k5\_numbers) \quad (11)$$

Assume the following.

$$\forall X0. ((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v1\_zf\_lang (k22\_zf\_lang X0)) \wedge (m2\_finseq\_1 (k22\_zf\_lang X0) k5\_numbers)) \quad (12)$$

Assume the following.

$$\forall X0. ((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v1\_zf\_lang (k21\_zf\_lang X0)) \wedge (m2\_finseq\_1 (k21\_zf\_lang X0) k5\_numbers)) \quad (13)$$

Assume the following.

$$\forall X0. ((v1\_zf\_lang X0) \wedge (m1\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v1\_zf\_lang (k20\_zf\_lang X0)) \wedge (m2\_finseq\_1 (k20\_zf\_lang X0) k5\_numbers)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v9\_zf\_lang\ X0)\Leftrightarrow(\exists X1.((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1 \\ k5\_numbers))\wedge(\exists X2.((v1\_zf\_lang\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge \\ (X0 = k11\_zf\_lang\ X1\ X2)))) \end{aligned} \tag{15}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v8\_zf\_lang\ X0)\Leftrightarrow(\exists X1.((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1 \\ k5\_numbers))\wedge(\exists X2.((v1\_zf\_lang\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge \\ (X0 = k10\_zf\_lang\ X1\ X2)))) \end{aligned} \tag{16}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(\forall X1. \\ ((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1\ k5\_numbers))\Rightarrow(k10\_zf\_lang \\ X0\ X1 = k6\_zf\_lang\ (k7\_zf\_lang\ (k6\_zf\_lang\ X0)\ (k6\_zf\_lang\ X1)))) \end{aligned} \tag{17}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v5\_zf\_lang\ X0)\Leftrightarrow(\exists X1.((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1 \\ k5\_numbers))\wedge(\exists X2.((v1\_zf\_lang\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge \\ (X0 = k7\_zf\_lang\ X1\ X2)))) \end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned} \forall X0.(((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v4\_zf\_lang\ X0)\Leftrightarrow(\exists X1.((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1 \\ k5\_numbers))\wedge(X0 = k6\_zf\_lang\ X1)))) \end{aligned} \tag{19}$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v8\_zf\_lang\ X0)\Rightarrow((v9\_zf\_lang\ X0)\wedge((v4\_zf\_lang\ X0)\wedge((v5\_zf\_lang \\ (k20\_zf\_lang\ X0))\wedge((v4\_zf\_lang\ (k21\_zf\_lang\ (k20\_zf\_lang\ X0)))\wedge \\ (v4\_zf\_lang\ (k22\_zf\_lang\ (k20\_zf\_lang\ X0)))))))) \end{aligned}$$