

t10\_zf\_model  
(TMPK7HKZUR4buThnaXqtZPgSc7wWUkfLa8g)

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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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v5\_zf\_lang : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zf\_lang : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_zf\_model : \iota \Rightarrow \iota \Rightarrow \iota$  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. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_zf\_lang X1) \wedge ( \\ & m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow (\forall X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 \\ & X2 k5\_numbers)) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 \\ & k1\_zf\_lang X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_zf\_lang \\ & X0)))))) \Rightarrow (((X3 \in k5\_zf\_model X1 X0) \wedge (X3 \in k5\_zf\_model X2 X0)) \Leftrightarrow (X3 \in \\ & k5\_zf\_model (k7\_zf\_lang X1 X2) X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow ((v5\_zf\_lang X0) \Rightarrow (X0 = k7\_zf\_lang (k21\_zf\_lang X0) (k22\_zf\_lang X0))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow ((v5\_zf\_lang \\ & X0) \Rightarrow ((\neg (X1 = k21\_zf\_lang X0) \wedge (\forall X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 \\ & X2 k5\_numbers)) \Rightarrow (k7\_zf\_lang X1 X2 \neq X0))) \wedge (((\exists X2.((v1\_zf\_lang \\ & X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \wedge (k7\_zf\_lang X1 X2 = X0)) \Rightarrow (X1 = \\ & k21\_zf\_lang X0)) \wedge ((\neg (X1 = k22\_zf\_lang X0) \wedge (\forall X2.((v1\_zf\_lang \\ & X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \Rightarrow (k7\_zf\_lang X2 X1 \neq X0))) \wedge (( \\ & \exists X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \wedge (k7\_zf\_lang \\ & X2 X1 = X0)) \Rightarrow (X1 = k22\_zf\_lang X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(( \\ v5\_zf\_lang\ X0)\Leftrightarrow(\exists X1.((v1\_zf\_lang\ X1)\wedge(m2\_finseq\_1\ X1 \\ k5\_numbers))\wedge(\exists X2.((v1\_zf\_lang\ X2)\wedge(m2\_finseq\_1\ X2\ k5\_numbers))\wedge \\ (X0 = k7\_zf\_lang\ X1\ X2)))) \end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_zf\_lang\ X0)\wedge(m2\_finseq\_1\ X0\ k5\_numbers))\Rightarrow(\forall X1. \\ (\neg v1\_xboole\_0\ X1)\Rightarrow((v5\_zf\_lang\ X0)\Rightarrow(\forall X2.((v1\_funct\_1 \\ X2)\wedge((v1\_funct\_2\ X2\ k1\_zf\_lang\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1\ k1\_zf\_lang\ X1))))))\Rightarrow(((X2 \in k5\_zf\_model\ (k21\_zf\_lang \\ X0)\ X1)\wedge(X2 \in k5\_zf\_model\ (k22\_zf\_lang\ X0)\ X1))\Leftrightarrow(X2 \in k5\_zf\_model \\ X0\ X1)))) \end{aligned}$$