

t42\_zf\_lang1

(TML9pDDgVvz1X4BttrW7qMXm32oMSfLMGP1)

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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  $r3\_zf\_lang : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_zf\_lang : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_zf\_lang : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow (\forall X2. ( \\ & (v1\_zf\_lang X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \Rightarrow ((\neg(\neg(r3\_zf\_lang \\ & X0 X1) \wedge (r2\_zf\_lang X1 X2)) \wedge (\neg(r2\_zf\_lang X0 X1) \wedge (r3\_zf\_lang \\ & X1 X2)) \wedge (\neg(r2\_zf\_lang X0 X1) \wedge (r1\_zf\_lang X1 X2)) \wedge (\neg(r1\_zf\_lang \\ & X0 X1) \wedge (r2\_zf\_lang X1 X2)) \wedge (\neg(r3\_zf\_lang X0 X1) \wedge (r1\_zf\_lang \\ & X1 X2)) \wedge (\neg(r1\_zf\_lang X0 X1) \wedge (r3\_zf\_lang X1 X2)))))) \Rightarrow (r3\_zf\_lang \\ & X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow ((r3\_zf\_lang \\ & X0 X1) \Leftrightarrow ((r2\_zf\_lang X0 X1) \wedge (X0 \neq X1)))) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (\forall X1. \\ & ((v1\_zf\_lang X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow (\neg(r3\_zf\_lang \\ & X0 X1) \wedge (r2\_zf\_lang X1 X0))) \end{aligned}$$