

# t44\_zf\_lang (TMJwnYK- MzZ48rn7tMKCAxjnrhKY8QDe2csX)

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  $v6\_zf\_lang : \iota \Rightarrow o$  be given. Let  $k8\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k23\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $k24\_zf\_lang : \iota \Rightarrow \iota$  be given. Let  $v11\_zf\_lang : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zf\_lang : \iota$  be given. Let  $k13\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & \quad (v6\_zf\_lang X0) \vee (v11\_zf\_lang X0)) \Rightarrow (\forall X1.((v1\_zf\_lang \\ X1) \wedge (m2\_finseq\_1 X1 k5\_numbers)) \Rightarrow (((v6\_zf\_lang X0) \Rightarrow ((X1 = k24\_zf\_lang \\ X0) \Leftrightarrow (\exists X2.(m2\_subset\_1 X2 k5\_numbers k1\_zf\_lang) \wedge (k8\_zf\_lang \\ X2 X1 = X0)))) \wedge ((\neg v6\_zf\_lang X0) \Rightarrow ((X1 = k24\_zf\_lang X0) \Leftrightarrow (\exists X2. \\ (m2\_subset\_1 X2 k5\_numbers k1\_zf\_lang) \wedge (k13\_zf\_lang X2 X1 = X0))))))) \\ & \hspace{15em} (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & \quad (v6\_zf\_lang X0) \vee (v11\_zf\_lang X0)) \Rightarrow (\forall X1.(m2\_subset\_1 \\ X1 k5\_numbers k1\_zf\_lang) \Rightarrow (((v6\_zf\_lang X0) \Rightarrow ((X1 = k23\_zf\_lang \\ X0) \Leftrightarrow (\exists X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \wedge \\ (k8\_zf\_lang X1 X2 = X0)))) \wedge ((\neg v6\_zf\_lang X0) \Rightarrow ((X1 = k23\_zf\_lang \\ X0) \Leftrightarrow (\exists X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \wedge \\ (k13\_zf\_lang X1 X2 = X0))))))) \\ & \hspace{15em} (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & \quad v6\_zf\_lang X0) \Leftrightarrow (\exists X1.(m2\_subset\_1 X1 k5\_numbers k1\_zf\_lang) \wedge \\ & \quad (\exists X2.((v1\_zf\_lang X2) \wedge (m2\_finseq\_1 X2 k5\_numbers)) \wedge \\ & \quad \quad X0 = k8\_zf\_lang X1 X2))) \\ & \hspace{15em} (3) \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_zf\_lang X0) \wedge (m2\_finseq\_1 X0 k5\_numbers)) \Rightarrow (( \\ & \quad v6\_zf\_lang X0) \Rightarrow (X0 = k8\_zf\_lang (k23\_zf\_lang X0) (k24\_zf\_lang \\ & \quad \quad X0))) \end{aligned}$$