

t153\_zf\_lang1

(TMP7QxYtkUMMu8Ks7tvpvy62paXjSQrENHy)

October 27, 2020

Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_zf\_lang : \iota$  be given. Let  $k5\_zf\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_zf\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X1. \\ & (m2\_subset\_1 X1 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X3.(m2\_subset\_1 X3 k5\_numbers \\ & k1\_zf\_lang) \Rightarrow (\forall X4.(m2\_subset\_1 X4 k5\_numbers k1\_zf\_lang) \Rightarrow \\ & (\forall X5.(m2\_subset\_1 X5 k5\_numbers k1\_zf\_lang) \Rightarrow ((k5\_zf\_lang1 \\ & (k4\_zf\_lang X0 X1) X2 X3 = k4\_zf\_lang X4 X5) \Leftrightarrow (\neg(\neg(X0 \neq X2) \wedge ((X1 \neq X2) \wedge \\ & ((X4 = X0) \wedge (X5 = X1)))))) \wedge ((\neg(X0 = X2) \wedge ((X1 \neq X2) \wedge ((X4 = X3) \wedge (X5 = X1)))))) \wedge \\ & ((\neg(X0 \neq X2) \wedge ((X1 = X2) \wedge ((X4 = X0) \wedge (X5 = X3)))))) \wedge (\neg(X0 = X2) \wedge ((X1 = \\ & X2) \wedge ((X4 = X3) \wedge (X5 = X3)))))))))) \end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X1. \\ & (m2\_subset\_1 X1 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 k5\_numbers k1\_zf\_lang) \Rightarrow (\forall X3.(m2\_subset\_1 X3 k5\_numbers \\ & k1\_zf\_lang) \Rightarrow (\exists X4.(m2\_subset\_1 X4 k5\_numbers k1\_zf\_lang) \wedge \\ & (\exists X5.(m2\_subset\_1 X5 k5\_numbers k1\_zf\_lang) \wedge (k5\_zf\_lang1 \\ & (k4\_zf\_lang X0 X1) X2 X3 = k4\_zf\_lang X4 X5)))))) \end{aligned}$$