

t70\_rewrite3 (TM-  
Tria2nqQBPMaVd9L3hYsrpHMHrvcWksU)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
 & (k8\_afinsq\_1 X2)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\
 & k8\_afinsq\_1 X2))) \Rightarrow (\forall X6. ((\neg v2\_struct\_0 X6) \wedge (l1\_rewrite3 \\
 & X6 X5)) \Rightarrow (\forall X7. (m1\_rewrite1 X7 (k1\_rewrite3 X2 X5 X6)) \Rightarrow (\neg \\
 & (k1\_funct\_1 X7 np\_1 = k4\_tarski X0 X3) \wedge ((k1\_funct\_1 X7 (k3\_finseq\_1 \\
 & X7) = k4\_tarski X1 X4) \wedge (\forall X8. (m1\_subset\_1 X8 (k8\_afinsq\_1 \\
 & X2)) \Rightarrow (X3 \neq k1\_flang\_1 X2 X8 X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((m1\_subset\_1 \\
 & X1 (k1\_zfmisc\_1 (k8\_afinsq\_1 X0))) \wedge ((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\
 & X2 X1)))) \Rightarrow (m1\_subset\_1 (k1\_rewrite3 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & (k2\_zfmisc\_1 (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)) (k2\_zfmisc\_1 \\
 & (u1\_struct\_0 X2) (k8\_afinsq\_1 X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 \\
 & X1) (k1\_tarski X0)
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r1\_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1\_rewrite1 X3 X0) \wedge ((k1\_funct\_1 X3 np\_1 = X1) \wedge (k1\_funct\_1 X3 (k3\_finseq\_1 X3) = X2)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\ & (k8\_afinsq\_1 X2)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\ & k8\_afinsq\_1 X2))) \Rightarrow (\forall X6.((\neg v2\_struct\_0 X6) \wedge (l1\_rewrite3 \\ & X6 X5)) \Rightarrow (\neg (r1\_rewrite1 (k1\_rewrite3 X2 X5 X6) (k4\_tarski X0 X3) \\ & (k4\_tarski X1 X4)) \wedge (\forall X7.(m1\_subset\_1 X7 (k8\_afinsq\_1 X2)) \Rightarrow \\ & (X3 \neq k1\_flang\_1 X2 X7 X4)))))) \end{aligned}$$