

## t58\_rewrite3

(TMWWK9rLkf9ihTs1Z6MfK5tNzBbrCvzTGDm)

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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  $r1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((m1\_rewrite1 (k10\_finseq\_1 X0 X1) X2) \Rightarrow (k4\_tarski X0 X1 \in X2)) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. \forall X2. (k4\_tarski X1 X2 \in X0) \Rightarrow (m1\_rewrite1 (k10\_finseq\_1 X1 X2) X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ & (k8\_afinsq\_1 X2)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\ & k8\_afinsq\_1 X2)))) \Rightarrow (\forall X6. ((\neg v2\_struct\_0 X6) \wedge (l1\_rewrite3 \\ & X6 X5)) \Rightarrow ((r1\_rewrite3 X5 X6 X0 X3 X1) \Leftrightarrow (k4\_tarski (k4\_tarski X0 ( \\ & k1\_flang\_1 X2 X3 X4)) (k4\_tarski X1 X4) \in k1\_rewrite3 X2 X5 X6)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k8\_afinsq\_1 X0))) \wedge ((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\ & X2 X1)))) \Rightarrow (m1\_subset\_1 (k1\_rewrite3 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)) (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)))))) \quad (4) \end{aligned}$$

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**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v1\_xboole\_0 X2)\Rightarrow(\forall X3. \\ & (m1\_subset\_1 X3 (k8\_afinsq\_1 X2))\Rightarrow(\forall X4.(m1\_subset\_1 X4 \\ & (k8\_afinsq\_1 X2))\Rightarrow(\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\ & k8\_afinsq\_1 X2))))\Rightarrow(\forall X6.((\neg v2\_struct\_0 X6)\wedge(l1\_rewrite3 \\ & X6 X5))\Rightarrow((r1\_rewrite3 X5 X6 X0 X3 X1)\Leftrightarrow(m1\_rewrite1 (k10\_finseq\_1 \\ & (k4\_tarski X0 (k1\_flang\_1 X2 X3 X4) (k4\_tarski X1 X4) (k1\_rewrite3 \\ & X2 X5 X6)))))))) \end{aligned}$$