

## t24\_rewrite3

(TMV6BDTwgjc2VKbxz42NM576JAUfb1YgHP4)

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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  $l1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k8\_afinsq\_1 \\ X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X3. \\ (m1\_subset\_1 X3 (k8\_afinsq\_1 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ (k8\_afinsq\_1 X0)) \Rightarrow ((k1\_flang\_1 X0 X1 X2 = k1\_flang\_1 X0 X3 X4) \Rightarrow ( \\ ((k1\_afinsq\_1 X1 \neq k1\_afinsq\_1 X3) \wedge (k1\_afinsq\_1 X2 \neq k1\_afinsq\_1 \\ X4)) \vee ((X1 = X3) \wedge (X2 = X4)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2. (l1\_rewrite3 X2 X1) \Rightarrow (\forall X3. \\ \forall X4. \forall X5. \forall X6. (r2\_rewrite3 X0 X1 X2 X3 X4 X5 X6) \Leftrightarrow \\ (\exists X7. (m1\_subset\_1 X7 (k8\_afinsq\_1 X0)) \wedge (\exists X8. (m1\_subset\_1 \\ X8 (k8\_afinsq\_1 X0)) \wedge ((X7 = X6) \wedge ((r1\_rewrite3 X1 X2 X3 X8 X5) \wedge (X4 = \\ k1\_flang\_1 X0 X8 X7)))))))))) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\ (m1\_subset\_1 X3 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ (k8\_afinsq\_1 X2)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\ k8\_afinsq\_1 X2))) \Rightarrow (\forall X6. (l1\_rewrite3 X6 X5) \Rightarrow ((r1\_rewrite3 \\ X5 X6 X0 X3 X1) \Leftrightarrow (r2\_rewrite3 X2 X5 X6 X0 (k1\_flang\_1 X2 X3 X4) X1 X4)))))) \end{aligned}$$