

# t27\_rewrite3

## (TMcHEptviiykoB1EaujJKSJjzZEvw2TG6E4)

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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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $l1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $u1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r2\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\ & (k8\_afinsq\_1 X2)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (k1\_zfmisc\_1 ( \\ & k8\_afinsq\_1 X2))) \Rightarrow (\forall X6. (l1\_rewrite3 X6 X5) \Rightarrow ((r1\_rewrite3 \\ & X5 X6 X0 X3 X1) \Leftrightarrow (r2\_rewrite3 X2 X5 X6 X0 (k1\_flang\_1 X2 X3 X4) X1 X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (\neg v1\_xboole\_0 \\ & X4) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k8\_afinsq\_1 X4))) \Rightarrow \\ & (\forall X6. (l1\_rewrite3 X6 X5) \Rightarrow (((v1\_relat\_1 (u1\_rewrite3 \\ & X5 X6)) \wedge (v1\_funct\_1 (u1\_rewrite3 X5 X6))) \wedge ((r1\_rewrite3 X5 X6 \\ & X0 X1 X2) \wedge (r1\_rewrite3 X5 X6 X0 X1 X3))) \Rightarrow (X2 = X3)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2. (l1\_rewrite3 X2 X1) \Rightarrow (\forall X3. \\ & \forall X4. \forall X5. \forall X6. (r2\_rewrite3 X0 X1 X2 X3 X4 X5 X6) \Leftrightarrow \\ & (\exists X7. (m1\_subset\_1 X7 (k8\_afinsq\_1 X0)) \wedge (\exists X8. (m1\_subset\_1 \\ & X8 (k8\_afinsq\_1 X0)) \wedge ((X7 = X6) \wedge ((r1\_rewrite3 X1 X2 X3 X8 X5) \wedge (X4 = \\ & k1\_flang\_1 X0 X8 X7)))))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (\neg v1\_xboole\_0 X5) \Rightarrow (\forall X6. (m1\_subset\_1 X6 (k1\_zfmisc\_1 ( \\ & k8\_afinsq\_1 X5))) \Rightarrow (\forall X7. (l1\_rewrite3 X7 X6) \Rightarrow (((v1\_relat\_1 \\ & (u1\_rewrite3 X6 X7)) \wedge (v1\_funct\_1 (u1\_rewrite3 X6 X7))) \wedge ((r2\_rewrite3 \\ & X5 X6 X7 X0 X1 X2 X3) \wedge (r2\_rewrite3 X5 X6 X7 X0 X1 X4 X3))) \Rightarrow (X2 = X4)))) \end{aligned}$$