

# t35\_rewrite3 (TMPdPw- StqtHChZqKNgh8dMuQFZtyqkcSCEs)

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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  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k8\_afinsq\_1 X0))) \wedge ((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\ & X2 X1)))) \Rightarrow (m1\_subset\_1 (k1\_rewrite3 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)) (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\ & X2 X1)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)) (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)))))) \Rightarrow ((X3 = k1\_rewrite3 X0 X1 \\ & X2) \Leftrightarrow (\forall X4. \forall X5. \forall X6. \forall X7. (k4\_tarski \\ & (k4\_tarski X4 X5) (k4\_tarski X6 X7) \in X3) \Leftrightarrow (r2\_rewrite3 X0 X1 X2 X4 \\ & X5 X6 X7)))))) \end{aligned} \tag{2}$$

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**

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(\neg v1\_xboole\_0 \\ & X4)\Rightarrow(\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k8\_afinsq\_1 X4)))\Rightarrow \\ & (\forall X6.((\neg v2\_struct\_0 X6)\wedge(l1\_rewrite3 X6 X5))\Rightarrow(\neg(k4\_tarski \\ & (k4\_tarski X0 X1) (k4\_tarski X2 X3) \in k1\_rewrite3 X4 X5 X6)\wedge(\forall X7. \\ & (m1\_subset\_1 X7 (k8\_afinsq\_1 X4))\Rightarrow(\forall X8.(m1\_subset\_1 X8 \\ & (k8\_afinsq\_1 X4))\Rightarrow(\neg(X7 = X3)\wedge((r1\_rewrite3 X5 X6 X0 X8 X2)\wedge(X1 = \\ & k1\_flang\_1 X4 X8 X7)))))))))) \end{aligned}$$