

# t81\_rewrite3 (TMVHeKnwn- wiTwMF7BWXztUGpbs8zpF7vbwz)

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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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & \quad (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & \quad (k8\_afinsq\_1 X0))) \Rightarrow (\forall X3.((\neg v2\_struct\_0 X3) \wedge (l1\_rewrite3 \\ & \quad X3 X1)) \Rightarrow (\forall X4.((\neg v2\_struct\_0 X4) \wedge (l1\_rewrite3 X4 X2)) \Rightarrow \\ & ((u1\_rewrite3 X1 X3 = u1\_rewrite3 X2 X4) \Rightarrow (k1\_rewrite3 X0 X1 X3 = k1\_rewrite3 \\ & \quad X0 X2 X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & \quad (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2.((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\ & \quad X2 X1)) \Rightarrow (\forall X3.\forall X4.\forall X5.\forall X6.(r3\_rewrite3 \\ & X0 X1 X2 X3 X4 X5 X6) \Leftrightarrow (r1\_rewrite1 (k1\_rewrite3 X0 X1 X2) (k4\_tarski \\ & \quad X3 X4) (k4\_tarski X5 X6)))))) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(\neg v1\_xboole\_0 \\ & X4) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k8\_afinsq\_1 X4))) \Rightarrow \\ & (\forall X6.(m1\_subset\_1 X6 (k1\_zfmisc\_1 (k8\_afinsq\_1 X4))) \Rightarrow \\ & (\forall X7.((\neg v2\_struct\_0 X7) \wedge (l1\_rewrite3 X7 X5)) \Rightarrow (\forall X8. \\ & ((\neg v2\_struct\_0 X8) \wedge (l1\_rewrite3 X8 X6)) \Rightarrow (((u1\_struct\_0 X7 = u1\_struct\_0 \\ & X8) \wedge ((u1\_rewrite3 X5 X7 = u1\_rewrite3 X6 X8) \wedge (r3\_rewrite3 X4 X5 \\ & X7 X0 X1 X2 X3))) \Rightarrow (r3\_rewrite3 X4 X6 X8 X0 X1 X2 X3)))))) \end{aligned}$$