

# t17\_rewrite3 (TM- PAQPQ956KsMNH9viZR3EKvX2rFM7UMMYF)

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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  $r1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (l1\_rewrite3\ X1\ X0) \Rightarrow (\forall X2. \forall X3. \\ & \forall X4. (r1\_rewrite3\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (k4\_tarski\ (k4\_tarski\ X2 \\ & \quad X3)\ X4 \in u1\_rewrite3\ X0\ X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_funct\_1\ X0) \Leftrightarrow (\forall X1. \forall X2. \forall X3. \\ & ((k4\_tarski\ X1\ X2 \in X0) \wedge (k4\_tarski\ X1\ X3 \in X0)) \Rightarrow (X2 = X3)) \end{aligned} \quad (2)$$

## Theorem 1

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