t45_rewrite3 (TMHmz3uTfUBzo1y3UNjDrMLda26EHtWpSaj)

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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 $v2\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(\neg v1\_xboole\_0\ X3) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X3))) \Rightarrow (\forall X5.((\neg v2\_struct\_0\ X5) \wedge (l1\_rewrite3\ X5\ X4)) \Rightarrow (((v2\_rewrite3\ X5\ X3\ X4) \wedge ((k4\_tarski\ X0\ X1 \in k1\_rewrite3\ X3\ X4\ X5) \wedge (k4\_tarski\ X0\ X2 \in k1\_rewrite3\ X3\ X4\ X5))) \Rightarrow (X1 = X2))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski\ X0\ X1 = k4\_tarski\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \tag{2}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.(\neg v1\_xboole\_0\ X5) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X5))) \Rightarrow (\forall X7.((\neg v2\_struct\_0\ X7) \wedge (l1\_rewrite3\ X7\ X6)) \Rightarrow (((v2\_rewrite3\ X7\ X5\ X6) \wedge ((k4\_tarski\ X0\ (k4\_tarski\ X1\ X2) \in k1\_rewrite3\ X5\ X6\ X7) \wedge (k4\_tarski\ X0\ (k4\_tarski\ X3\ X4) \in k1\_rewrite3\ X5\ X6\ X7))) \Rightarrow ((X1 = X3) \wedge (X2 = X4)))))$$