t39_rewrite3 (TMbx2AYUJU3NebWuGwPzSWTw6KB2coz87tz)

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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 $k8\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ 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 $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(\neg v1\_xboole\_0\ X2) \Rightarrow (\forall X3.\ (m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X2)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k8\_afinsq\_1\ X2)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (k8\_afinsq\_1\ X2)) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X2))) \Rightarrow (\forall X7.(l1\_rewrite3\ X7\ X6) \Rightarrow ((r2\_rewrite3\ X2\ X6\ X7\ X0\ X3\ X1\ X4) \Rightarrow (r2\_rewrite3\ X2\ X6\ X7\ X0\ (k1\_flang\_1\ X2\ X3\ X5)\ X1\ (k1\_flang\_1\ X2\ X4\ X5)))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \wedge ((\neg v2\_struct\_0\ X2) \wedge (l1\_rewrite3\ X2\ X1)))) \Rightarrow (m1\_subset\_1\ (k1\_rewrite3\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0)))))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (l1\_rewrite3\ X2\ X1)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0))))) \Rightarrow ((X3 = k1\_rewrite3\ X0\ X1\ X2) \Leftrightarrow (\forall X4.\forall X5.\forall X6.\forall X7.(k4\_tarski\ (k4\_tarski\ X4\ X5)\ (k4\_tarski\ X6\ X7) \in X3) \Leftrightarrow (r2\_rewrite3\ X0\ X1\ X2\ X4\ X5\ X6\ X7)))))) \tag{3}$$

Theorem 1

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