t83_rewrite3 (TMa1iCVNKVMqHGXjG7d5oMgvpve2wovYJ66)

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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 $r3\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X1))) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge (l1\_rewrite3\ X3\ X2)) \Rightarrow (\neg (X0 \in k1\_rewrite3\ X1\ X2\ X3) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X3)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X3)) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (k8\_afinsq\_1\ X1)) \Rightarrow (\forall X7.(m1\_subset\_1\ X7\ (k8\_afinsq\_1\ X1)) \Rightarrow (X0 \neq k4\_tarski\ (k4\_tarski\ X4\ X6)\ (k4\_tarski\ X5\ X7)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.\forall X2.\forall X3.((r1\_rewrite1\ X0\ X1\ X2) \wedge (r1\_rewrite1\ X0\ X2\ X3)) \Rightarrow (r1\_rewrite1\ X0\ X1\ X3)) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (l1\_rewrite3\ X2\ X1)) \Rightarrow (\forall X3.\forall X4.\forall X5.\forall X6.(r3\_rewrite3\ X0\ X1\ X2\ X3\ X4\ X5\ X6) \Leftrightarrow (r1\_rewrite1\ (k1\_rewrite3\ X0\ X1\ X2)\ (k4\_tarski\ X3\ X4)\ (k4\_tarski\ X5\ X6))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Leftrightarrow (\forall X1.\neg (X1 \in X0) \wedge (\forall X2.\forall X3.X1 \neq k4\_tarski\ X2\ X3)) \tag{4}$$

Theorem 1

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