t80_rewrite3 (TMZX8w73tJN7akYTRhncwGpQZsZguDf8r7t)

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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 $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(k1\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X0) \wedge (k2\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X1) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (l1\_rewrite3\ X2\ X1)) \Rightarrow ((v2\_rewrite3\ X2\ X0\ X1) \Rightarrow (\forall X3.(m1\_rewrite1\ X3\ (k1\_rewrite3\ X0\ X1\ X2)) \Rightarrow (\forall X4.(m1\_rewrite1\ X4\ (k1\_rewrite3\ X0\ X1\ X2)) \Rightarrow (((k1\_funct\_1\ X3\ np\_\_1 = k1\_funct\_1\ X4\ np\_\_1) \wedge (k2\_xtuple\_0\ (k1\_funct\_1\ X3\ (k3\_finseq\_1\ X3)) = k2\_xtuple\_0\ (k1\_funct\_1\ X4\ (k3\_finseq\_1\ X4)))) \Rightarrow (X3 = X4)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \wedge ((\neg v2\_struct\_0\ X2) \wedge (l1\_rewrite3\ X2\ X1)))) \Rightarrow (m1\_subset\_1\ (k1\_rewrite3\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (k8\_afinsq\_1\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.\forall X2.(r1\_rewrite1\ X0\ X1\ X2) \Leftrightarrow (\exists X3.(m1\_rewrite1\ X3\ X0) \wedge ((k1\_funct\_1\ X3\ np\_\_1 = X1) \wedge (k1\_funct\_1\ X3\ (k3\_finseq\_1\ X3) = X2)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{5}$$

Theorem 1

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