t60_rewrite2 (TMLsErAXG-gcAa1BGxE4abR27ni2WuHDPr9Q)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $r4\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ (k2\_xboole\_0\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k8\_afinsq\_1\ X0))\Rightarrow(((r4\_rewrite2\ X0\ X1\ X2\ X3)\wedge(r3\_rewrite2\ X0\ (k4\_subset\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))\ X1\ X2)\ X3\ X4))\Rightarrow(r3\_rewrite2\ X0\ X1\ X3\ X4))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow((r1\_relset\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0)\ X1\ X2)\Rightarrow(r1\_tarski\ (k8\_rewrite2\ X0\ X1\ X3)\ (k8\_rewrite2\ X0\ X2\ X3))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((r1\_relset\_1\ X0\ X1\ X2\ X3)\Leftrightarrow(r1\_tarski\ X2\ X3)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k2\_xboole\_0\ X1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(m1\_subset\_1\ (k4\_subset\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow((r4\_rewrite2\ X0\ X1\ X2\ X3)\Leftrightarrow(k8\_rewrite2\ X0\ X1\ X3 = k8\_rewrite2\ X0\ X2\ X3)))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k8\_afinsq\_1\ X0))\Rightarrow(k8\_rewrite2\ X0\ X1\ X2 = ReplSep\ (toset\ (\lambda X3 : \iota.m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0)))\ (\lambda X3 : \iota.r3\_rewrite2\ X0\ X1\ X2\ X3)\ (\lambda X3 : \iota.X3))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k4\_subset\_1\ X0\ X1\ X2 = k4\_subset\_1\ X0\ X2\ X1) \tag{11}$$

Theorem 1

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow((r4\_rewrite2\ X0\ X1\ X2\ X3)\Rightarrow(r4\_rewrite2\ X0\ X1\ (k4\_subset\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))\ X1\ X2)\ X3))))$$