t21_rewrite2 (TMLtZPB5fKgwkWej1sCMaGxdUB5mjJ4pemE)

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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 $r2\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0))) \Rightarrow (k4\_subset\_1\ X0\ X1\ X2 = k2\_xboole\_0\ X1\ X2) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0))) \Rightarrow (m1\_subset\_1\ (k4\_subset\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0)))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k8\_afinsq\_1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0)) \Rightarrow ((r2\_rewrite2\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m1\_subset\_1\ X4\ (k8\_afinsq\_1\ X0)) \wedge (\exists X5.(m1\_subset\_1\ X5\ (k8\_afinsq\_1\ X0)) \wedge (\exists X6.(m1\_subset\_1\ X6\ (k8\_afinsq\_1\ X0)) \wedge (\exists X7.(m1\_subset\_1\ X7\ (k8\_afinsq\_1\ X0)) \wedge ((X2 = k1\_flang\_1\ X0\ (k1\_flang\_1\ X0\ X4\ X6)\ X5) \wedge ((X3 = k1\_flang\_1\ X0\ (k1\_flang\_1\ X0\ X4\ X7)\ X5) \wedge (r1\_rewrite2\ X0\ X1\ X6\ X7)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k8\_afinsq\_1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow((r1\_rewrite2\ X0\ X1\ X2\ X3)\Leftrightarrow(k1\_domain\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0)\ X2\ X3\in X1)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3\in X2)\Leftrightarrow((X3\in X0)\vee(X3\in X1))) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k8\_afinsq\_1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k8\_afinsq\_1\ X0))\Rightarrow(\neg(r2\_rewrite2\ X0\ (k4\_subset\_1\ (k2\_zfmisc\_1\ (k8\_afinsq\_1\ X0)\ (k8\_afinsq\_1\ X0))\ X1\ X2)\ X3\ X4)\wedge((\neg r2\_rewrite2\ X0\ X1\ X3\ X4)\wedge(\neg r2\_rewrite2\ X0\ X2\ X3\ X4))))))$$