

t77_rewrite3

(TMJa5Myo7pinRK1XT6tDbyFpUsF6T4WZQTy)

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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 $k2_flang_1 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $u1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ 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 $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (k8_afinsq_1 X2)) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (\\
 & k8_afinsq_1 X2)))) \Rightarrow (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\
 & X6 X5)) \Rightarrow ((\neg k2_flang_1 X2 \in k10_xtuple_0 (k9_xtuple_0 (u1_rewrite3 \\
 & X5 X6))) \Rightarrow (\forall X7. (m1_rewrite1 X7 (k1_rewrite3 X2 X5 X6)) \Rightarrow (\\
 & \neg (k1_funct_1 X7 np_1 = k4_tarski X0 X3) \wedge ((k1_funct_1 X7 (k3_finseq_1 \\
 & X7) = k4_tarski X1 X4) \wedge ((r1_xxreal_0 (k1_afinsq_1 X3) (k1_afinsq_1 \\
 & X4)) \wedge (\neg (k3_finseq_1 X7 = np_1) \wedge ((X0 = X1) \wedge (X3 = X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\
 & X1 (k1_zfmisc_1 (k8_afinsq_1 X0))) \wedge ((\neg v2_struct_0 X2) \wedge (l1_rewrite3 \\
 & X2 X1)))) \Rightarrow (m1_subset_1 (k1_rewrite3 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\
 & (k2_zfmisc_1 (u1_struct_0 X2) (k8_afinsq_1 X0)) (k2_zfmisc_1 \\
 & (u1_struct_0 X2) (k8_afinsq_1 X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{3}$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r1_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1_rewrite1 X3 X0) \wedge ((k1_funct_1 X3 np_1 = X1) \wedge (k1_funct_1 X3 (k3_finseq_1 X3) = X2)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (k8_afinsq_1 X2)) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (\\ & k8_afinsq_1 X2))) \Rightarrow (\forall X6.((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\ & X6 X5)) \Rightarrow (\neg(\neg k2_flang_1 X2 \in k10_xtuple_0 (k9_xtuple_0 (u1_rewrite3 \\ & X5 X6)))) \wedge ((r1_rewrite1 (k1_rewrite3 X2 X5 X6) (k4_tarski X0 X3) \\ & (k4_tarski X1 X4)) \wedge ((r1_xxreal_0 (k1_afinsq_1 X3) (k1_afinsq_1 \\ & X4)) \wedge (\neg(X0 = X1) \wedge (X3 = X4)))))))))) \end{aligned}$$