

t78_rewrite3 (TM-
PaWJpibqZhR84BoYuA4UdHrYxP1m7AyTH)

October 27, 2020

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 $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_flang_1 : \iota \Rightarrow \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (k8_afinsq_1 X2)) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (\\
 & k8_afinsq_1 X2))) \Rightarrow (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\
 & X6 X5)) \Rightarrow (\neg (k2_flang_1 X2 \in k10_xtuple_0 (k9_xtuple_0 (u1_rewrite3 \\
 & X5 X6)))) \wedge ((r1_rewrite1 (k1_rewrite3 X2 X5 X6) (k4_tarski X0 X3) \\
 & (k4_tarski X1 X4)) \wedge ((r1_xxreal_0 (k1_afinsq_1 X3) (k1_afinsq_1 \\
 & X4)) \wedge (\neg (X0 = X1) \wedge (X3 = X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (k8_afinsq_1 X2)) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (\\
 & k8_afinsq_1 X2))) \Rightarrow (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\
 & X6 X5)) \Rightarrow ((r1_rewrite1 (k1_rewrite3 X2 X5 X6) (k4_tarski X0 X3) (\\
 & k4_tarski X1 X4)) \Rightarrow (r1_xxreal_0 (k1_afinsq_1 X4) (k1_afinsq_1 \\
 & X3))))))
 \end{aligned} \tag{2}$$

Theorem 1

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