

t101_rewrite3 (TMdiiwahdUuKqKqNSAN- NTMt5aeqGZR5iRL7)

October 27, 2020

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 $r4_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $r2_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 X2) \Rightarrow (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k8_afinsq_1 X2))) \Rightarrow (\forall X5. ((\neg v2_struct_0 X5) \wedge (l1_rewrite3 \\ & X5 X4) \Rightarrow ((r3_rewrite3 X2 X4 X5 X0 (k3_flang_1 X2 X3) X1 (k2_flang_1 \\ & X2)) \Rightarrow ((k2_flang_1 X2 \in k10_xtuple_0 (k9_xtuple_0 (u1_rewrite3 \\ & X4 X5))) \vee (r2_rewrite3 X2 X4 X5 X0 (k3_flang_1 X2 X3) X1 (k2_flang_1 \\ & X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k8_afinsq_1 X0))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge (l1_rewrite3 \\ & X2 X1)) \Rightarrow (\forall X3. \forall X4. \forall X5. (r4_rewrite3 X0 X1 X2 \\ & X3 X4 X5) \Leftrightarrow (r3_rewrite3 X0 X1 X2 X3 X4 X5 (k2_flang_1 X0)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 X2) \Rightarrow (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k8_afinsq_1 X2))) \Rightarrow (\forall X5. ((\neg v2_struct_0 X5) \wedge (l1_rewrite3 \\ & X5 X4) \Rightarrow ((r4_rewrite3 X2 X4 X5 X0 (k3_flang_1 X2 X3) X1) \Rightarrow ((k2_flang_1 \\ & X2 \in k10_xtuple_0 (k9_xtuple_0 (u1_rewrite3 X4 X5))) \vee (r2_rewrite3 \\ & X2 X4 X5 X0 (k3_flang_1 X2 X3) X1 (k2_flang_1 X2)))))))))) \end{aligned}$$