

t91_rewrite3

(TMG3YggwWDyeZVkUnyE1zQn4AdJZ32NCXxK)

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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 $r3_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_rewritel : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (k8_afinsq_1 X2))) \Rightarrow (\forall X4. \\ & ((\neg v2_struct_0 X4) \wedge (l1_rewrite3 X4 X3)) \Rightarrow (r3_rewrite3 X2 X3 X4 \\ & X0 X1 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (k1_zfmisc_1 (k8_afinsq_1 X2))) \Rightarrow (\forall X5. ((\neg v2_struct_0 \\ & X5) \wedge (l1_rewrite3 X5 X4)) \Rightarrow ((r1_rewritel (k1_rewrite3 X2 X4 X5) \\ & (k4_tarski X0 X3) (k4_tarski X1 X3)) \Rightarrow ((k2_flang_1 X2 \in k10_xtuple_0 \\ & (k9_xtuple_0 (u1_rewrite3 X4 X5))) \vee (X0 = X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k8_afinsq_1 X0))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge (l1_rewrite3 \\ & X2 X1)) \Rightarrow (\forall X3. \forall X4. \forall X5. \forall X6. (r3_rewrite3 \\ & X0 X1 X2 X3 X4 X5 X6) \Leftrightarrow (r1_rewritel (k1_rewrite3 X0 X1 X2) (k4_tarski \\ & X3 X4) (k4_tarski X5 X6)))))) \end{aligned} \quad (3)$$

Theorem 1

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