

t94_rewrite3
(TMTP1FAJ2xGuJ1gknYqjuuuvczPTc17hfQD)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_flang_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (\neg v1_xboole_0 \\
& X4) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (k8_afinsq_1 X4))) \Rightarrow \\
& (\forall X6. (m1_subset_1 X6 (k1_zfmisc_1 (k8_afinsq_1 X4))) \Rightarrow \\
& (\forall X7. ((\neg v2_struct_0 X7) \wedge (l1_rewrite3 X7 X5)) \Rightarrow (\forall X8. \\
& ((\neg v2_struct_0 X8) \wedge (l1_rewrite3 X8 X6)) \Rightarrow (((u1_struct_0 X7 = u1_struct_0 \\
& X8) \wedge ((u1_rewrite3 X5 X7 = u1_rewrite3 X6 X8) \wedge (r3_rewrite3 X4 X5 \\
& X7 X0 X1 X2 X3))) \Rightarrow (r3_rewrite3 X4 X6 X8 X0 X1 X2 X3))))))
\end{aligned} \tag{1}$$

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

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (\neg v1_xboole_0 X3) \Rightarrow \\
& (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 (k8_afinsq_1 X3))) \Rightarrow \\
& (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (k8_afinsq_1 X3))) \Rightarrow \\
& (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 X6 X4)) \Rightarrow (\forall X7. \\
& ((\neg v2_struct_0 X7) \wedge (l1_rewrite3 X7 X5)) \Rightarrow (((u1_struct_0 X6 = u1_struct_0 \\
& X7) \wedge ((u1_rewrite3 X4 X6 = u1_rewrite3 X5 X7) \wedge (r4_rewrite3 X3 X4 \\
& X6 X0 X1 X2))) \Rightarrow (r4_rewrite3 X3 X5 X7 X0 X1 X2))))))
\end{aligned}$$