

t87_rewrite3

(TMQ6wvNSThVgGZsGq6XUmyjq2Pd5MgqHgnN)

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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 $r2_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (k8_afinsq_1 X2)) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (\\ & k8_afinsq_1 X2))) \Rightarrow (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\ & X6 X5)) \Rightarrow ((r1_rewrite3 X5 X6 X0 X3 X1) \Rightarrow (r3_rewrite3 X2 X5 X6 X0 (k1_flang_1 \\ & X2 X3 X4) X1 X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k8_afinsq_1 X0))) \Rightarrow (\forall X2. (l1_rewrite3 X2 X1) \Rightarrow (\forall X3. \\ & \forall X4. \forall X5. \forall X6. (r2_rewrite3 X0 X1 X2 X3 X4 X5 X6) \Leftrightarrow \\ & (\exists X7. (m1_subset_1 X7 (k8_afinsq_1 X0)) \wedge (\exists X8. (m1_subset_1 \\ & X8 (k8_afinsq_1 X0)) \wedge ((X7 = X6) \wedge ((r1_rewrite3 X1 X2 X3 X8 X5) \wedge (X4 = \\ & k1_flang_1 X0 X8 X7)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (\neg v1_xboole_0 \\ & X4) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (k8_afinsq_1 X4))) \Rightarrow \\ & (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 X6 X5)) \Rightarrow ((r2_rewrite3 \\ & X4 X5 X6 X0 X1 X2 X3) \Rightarrow (r3_rewrite3 X4 X5 X6 X0 X1 X2 X3)))) \end{aligned}$$