

t59_rewrite3

(TMUWwQqn2K4zKwizjNFCneCAJ6e28m9byWJ)

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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 $m1_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $k1_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k8_afinsq_1 \\ & \quad X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (k8_afinsq_1 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X0)) \Rightarrow ((X1 = k1_flang_1 X0 X2 X3) \Rightarrow (\\ & \quad (r1_xxreal_0 (k1_afinsq_1 X2) (k1_afinsq_1 X1)) \wedge (r1_xxreal_0 \\ & \quad \quad (k1_afinsq_1 X3) (k1_afinsq_1 X1))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X2)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & \quad (k8_afinsq_1 X2)) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 (\\ & \quad \quad k8_afinsq_1 X2))) \Rightarrow (\forall X6. ((\neg v2_struct_0 X6) \wedge (l1_rewrite3 \\ & \quad X6 X5)) \Rightarrow (\forall X7. (m1_rewrite1 X7 (k1_rewrite3 X2 X5 X6)) \Rightarrow (\neg \\ & (k1_funct_1 X7 np_1 = k4_tarski X0 X3) \wedge ((k1_funct_1 X7 (k3_finseq_1 \\ & \quad X7) = k4_tarski X1 X4) \wedge (\forall X8. (m1_subset_1 X8 (k8_afinsq_1 \\ & \quad \quad X2)) \Rightarrow (X3 \neq k1_flang_1 X2 X8 X4))))))))))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3. \\ & (m1_subset_1 X3 (k8_afinsq_1 X2))\Rightarrow(\forall X4.(m1_subset_1 X4 \\ & (k8_afinsq_1 X2))\Rightarrow(\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (\\ & k8_afinsq_1 X2)))\Rightarrow(\forall X6.((\neg v2_struct_0 X6)\wedge(l1_rewrite3 \\ & X6 X5))\Rightarrow(\forall X7.(m1_rewrite1 X7 (k1_rewrite3 X2 X5 X6))\Rightarrow((\\ & (k1_funct_1 X7 np_1 = k4_tarski X0 X3)\wedge(k1_funct_1 X7 (k3_finseq_1 \\ & X7) = k4_tarski X1 X4))\Rightarrow(r1_xxreal_0 (k1_afinsq_1 X4) (k1_afinsq_1 \\ & X3)))))))))) \end{aligned}$$