

t14_rewrite3 (TMHBiDxNN- dYnm9enBiX7RTCuEzyNC8UifZd)

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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 $l1_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $u1_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v2_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_flang_1 : \iota \Rightarrow \iota$ be given. Let $k4_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_flang_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$(k9_xtuple_0 k1_xboole_0 = k1_xboole_0) \wedge (k10_xtuple_0 k1_xboole_0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0. k2_flang_1 X0 = k4_afinsq_1 X0 \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v1_relat_1 X0)) \Rightarrow (\neg v1_xboole_0 (k9_xtuple_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k4_afinsq_1 X0)) \wedge ((v5_relat_1 (k4_afinsq_1 X0) X0) \wedge ((v5_ordinal1 (k4_afinsq_1 X0)) \wedge ((v1_funct_1 (k4_afinsq_1 X0)) \wedge ((v1_xboole_0 (k4_afinsq_1 X0)) \wedge (v1_finset_1 (k4_afinsq_1 X0)))))) \quad (6)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(l1_rewrite3 \ X1 \ X0) \Rightarrow (m1_subset_1 \ (u1_rewrite3 \ X0 \ X1) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ (u1_struct_0 \ X1) \ X0) \ (u1_struct_0 \ X1)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski \ X0 \ X1 = k2_tarski \ (k2_tarski \ X0 \ X1) \ (k1_tarski \ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k8_afinsq_1 \ X0))) \Rightarrow (\forall X2.(l1_rewrite3 \ X2 \ X1) \Rightarrow ((v2_rewrite3 \ X2 \ X0 \ X1) \Leftrightarrow (((v1_relat_1 \ (u1_rewrite3 \ X1 \ X2)) \wedge (v1_funct_1 \ (u1_rewrite3 \ X1 \ X2))) \wedge ((\neg k2_flang_1 \ X0 \in k10_xtuple_0 \ (k9_xtuple_0 \ (u1_rewrite3 \ X1 \ X2))) \wedge (\forall X3.(m1_subset_1 \ X3 \ (u1_struct_0 \ X2)) \Rightarrow (\forall X4.(m1_subset_1 \ X4 \ (k8_afinsq_1 \ X0)) \Rightarrow (\forall X5.(m1_subset_1 \ X5 \ (k8_afinsq_1 \ X0)) \Rightarrow (((k4_tarski \ X3 \ X4 \in k9_xtuple_0 \ (u1_rewrite3 \ X1 \ X2)) \wedge (k4_tarski \ X3 \ X5 \in k9_xtuple_0 \ (u1_rewrite3 \ X1 \ X2))) \Rightarrow ((X4 = X5) \vee (\forall X6.(m1_subset_1 \ X6 \ (k8_afinsq_1 \ X0)) \Rightarrow ((k1_flang_1 \ X0 \ X4 \ X6 \neq X5) \wedge (k1_flang_1 \ X0 \ X5 \ X6 \neq X4)))))))))))))) \quad (10) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski \ X0 \ X1 = k2_tarski \ X1 \ X0 \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (12)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k8_afinsq_1 \ X0))) \Rightarrow (\forall X2.(l1_rewrite3 \ X2 \ X1) \Rightarrow ((k9_xtuple_0 \ (u1_rewrite3 \ X1 \ X2) = k1_xboole_0) \Rightarrow (v2_rewrite3 \ X2 \ X0 \ X1))))$$