

t33_rewrite2 (TMUafMxDL- gPoUqPFpp8b9HP5nnZA8bFC8U6)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $r2_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(k4_tarski X1 X2 \in X0) \Rightarrow (r1_rewrite1 X0 X1 X2)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ & (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k8_afinsq_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (m1_subset_1 (k7_rewrite2 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 \\ & X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k8_afinsq_1 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 \\ & X0)) \Rightarrow ((r3_rewrite2 X0 X1 X2 X3) \Leftrightarrow (r1_rewrite1 (k7_rewrite2 X0 X1) \\ & X2 X3)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow \\ & ((X2 = k7_rewrite2 X0 X1) \Leftrightarrow (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 \\ & X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (k8_afinsq_1 X0)) \Rightarrow ((k1_domain_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0) X3 X4 \in X2) \Leftrightarrow (r2_rewrite2 X0 X1 \\ & X3 X4)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_relat_1 X1)) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k8_afinsq_1 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 \\ & X0)) \Rightarrow ((r2_rewrite2 X0 X1 X2 X3) \Rightarrow (r3_rewrite2 X0 X1 X2 X3)))) \end{aligned}$$