

t57_rewrite2 (TMFRkjAaKn- HjbL9kBYTQAGkszVh7M5zhCRw)

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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 $r4_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow \\ & (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 X0)) \Rightarrow ((r1_relset_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0) X1 X2) \Rightarrow (r1_tarski (k8_rewrite2 \\ & X0 X1 X3) (k8_rewrite2 X0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k8_afinsq_1 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k8_afinsq_1 \\ & X0)) \Rightarrow ((r3_rewrite2 X0 (k7_rewrite2 X0 X1) X2 X3) \Rightarrow (r3_rewrite2 \\ & X0 X1 X2 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (r1_relset_1 (k8_afinsq_1 \\ & X0) (k8_afinsq_1 X0) X1 (k7_rewrite2 X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (m1_subset_1 (k7_rewrite2 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 \\ & X0)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (k8_afinsq_1 X0)) \Rightarrow ((r4_rewrite2 \\ & X0 X1 X2 X3) \Leftrightarrow (k8_rewrite2 X0 X1 X3 = k8_rewrite2 X0 X2 X3)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k8_afinsq_1 X0)) \Rightarrow (k8_rewrite2 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota.m1_subset_1 X3 (k8_afinsq_1 X0))) (\lambda X3 : \iota.r3_rewrite2 \\ & X0 X1 X2 X3) (\lambda X3 : \iota.X3)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_afinsq_1 X0) (k8_afinsq_1 X0)))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k8_afinsq_1 X0)) \Rightarrow (r4_rewrite2 X0 X1 (k7_rewrite2 X0 X1) X2)) \end{aligned}$$