

t13_afproj

(TMakJ9HDZn44o9HrryB1nMcndKE2DaFcAmK)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_aff_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_afproj : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_aff_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_afproj : \iota \Rightarrow \iota$ be given. Let $k2_afproj : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & \quad (((v1_aff_4 X1 X0) \wedge ((v1_aff_4 X2 X0) \wedge (r1_aff_4 X0 X1 X2))) \Rightarrow (r1_aff_4 \\ & \quad \quad X0 X2 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v3_relat_2 X2) \wedge ((v8_relat_2 \\ & X2) \wedge ((v1_partfun1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))))) \Rightarrow (\forall X3.(X3 \in X0) \Rightarrow ((X1 \in k6_eqrel_1 X0 X0 X2 X3) \Leftrightarrow \\ & \quad (k6_eqrel_1 X0 X0 X2 X3 = k6_eqrel_1 X0 X0 X2 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & \quad ((v1_aff_4 X1 X0) \Rightarrow (\forall X2.(X2 \in k6_afproj X0 X1) \Leftrightarrow (\exists X3. \\ & \quad (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((X2 = X3) \wedge ((\\ & \quad \quad v1_aff_4 X3 X0) \wedge (r1_aff_4 X0 X1 X3))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ ((v3_relat_2 (k4_afproj X0)) \wedge ((v8_relat_2 (k4_afproj X0)) \wedge \\ (v1_partfun1 (k4_afproj X0) (k2_afproj X0)) \wedge (m1_subset_1 (k4_afproj \\ X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_afproj X0) (k2_afproj X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (k6_afproj X0 X1 = k6_eqrel_1 (k2_afproj X0) (k2_afproj X0) (k4_afproj \\ X0) X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ (k2_afproj X0 = ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0)))) (\lambda X1 : \iota.v1_aff_4 X1 X0) (\lambda X1 : \iota. \\ X1)) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (((v1_aff_4 X1 X0) \wedge (v1_aff_4 X2 X0)) \Rightarrow ((k6_afproj X0 X1 = k6_afproj \\ X0 X2) \Leftrightarrow (r1_aff_4 X0 X1 X2)))))) \end{aligned}$$