

t19_anproj_1
(TMJhnZCh41Fii9vMWF8mBgYaNX9sauI8zdY)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_anproj_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_anproj_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow ((v3_relat_2 (k1_anproj_1 X0)) \wedge ((v8_relat_2 (\\ & k1_anproj_1 X0)) \wedge ((v1_partfun1 (k1_anproj_1 X0) (k8_struct_0 \\ & X0)) \wedge (m1_subset_1 (k1_anproj_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k8_struct_0 X0) (k8_struct_0 X0))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge \\ & ((v1_partfun1 X1 (k8_struct_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k8_struct_0 X0) (k8_struct_0 X0))))))) \Rightarrow ((X1 = k1_anproj_1 \\ & X0) \Leftrightarrow (\forall X2. \forall X3. (k4_tarski X2 X3 \in X1) \Leftrightarrow ((X2 \in k8_struct_0 \\ & X0) \wedge ((X3 \in k8_struct_0 X0) \wedge (\exists X4. (m1_subset_1 X4 (u1_struct_0 \\ & X0)) \wedge (\exists X5. (m1_subset_1 X5 (u1_struct_0 X0)) \wedge ((X2 = X4) \wedge \\ & ((X3 = X5) \wedge (r1_anproj_1 X0 X4 X5)))))))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 \ X0) \wedge (v13_algstr_0 \ X0) \wedge (v2_rlvect_1 \\ & \ X0) \wedge (v3_rlvect_1 \ X0) \wedge (v4_rlvect_1 \ X0) \wedge (v5_rlvect_1 \ X0) \wedge \\ & ((v6_rlvect_1 \ X0) \wedge (v7_rlvect_1 \ X0) \wedge (v8_rlvect_1 \ X0) \wedge (l1_rlvect_1 \\ & \ X0)))))) \Rightarrow (\forall X1. \forall X2. (k4_tarski \ X1 \ X2 \in k1_anproj_1 \\ & \ X0) \Rightarrow ((m1_subset_1 \ X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \\ & \ X0)))) \end{aligned}$$