

t26_rmod_2 (TMNPPT- PABR42e5JgLVFWjDEiy6Gb9eezoRp)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v4_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_rmod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_vectsp_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (r1_tarski\ X0\ X1) \Rightarrow ((r1_tarski \\ & (k2_zfmisc_1\ X0\ X2)\ (k2_zfmisc_1\ X1\ X2)) \wedge (r1_tarski\ (k2_zfmisc_1 \\ & X2\ X0)\ (k2_zfmisc_1\ X2\ X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1\ X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((r1_tarski\ X0\ X1) \Rightarrow ((k5_relat_1\ (k5_relat_1\ X2\ X0)\ X1 = k5_relat_1 \\ & X2\ X0) \wedge (k5_relat_1\ (k5_relat_1\ X2\ X1)\ X0 = k5_relat_1\ X2\ X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski\ X0\ X1) \wedge (r1_tarski\ X1\ X2)) \Rightarrow (r1_tarski\ X0\ X2) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1\ (k2_zfmisc_1\ X0\ X1) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l1_struct_0 X0) \wedge (l1_vectsp_2 X1 X0)) \Rightarrow \\ ((v1_funct_1 (u1_vectsp_2 X0 X1)) \wedge ((v1_funct_2 (u1_vectsp_2 \\ X0 X1) (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)) (u1_struct_0 \\ X1)) \wedge (m1_subset_1 (u1_vectsp_2 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)) (u1_struct_0 \\ X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_algstr_0 X0) \Rightarrow ((v1_funct_1 (u1_algstr_0 X0)) \wedge \\ ((v1_funct_2 (u1_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u1_algstr_0 \\ X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow (\forall X1. (l1_vectsp_2 X1 X0) \Rightarrow (l2_algstr_0 X1)) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\ (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\ X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\ (l1_vectsp_2 X1 X0)))))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((\\ v13_algstr_0 X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 \\ X2) \wedge ((v4_vectsp_2 X2 X0) \wedge (l1_vectsp_2 X2 X0)))))) \Rightarrow ((m1_rmod_2 \\ X2 X0 X1) \Leftrightarrow ((r1_tarski (u1_struct_0 X2) (u1_struct_0 X1)) \wedge ((k4_struct_0 \\ X2 = k4_struct_0 X1) \wedge ((u1_algstr_0 X2 = k5_relat_1 (u1_algstr_0 \\ X1) (k2_zfmisc_1 (u1_struct_0 X2) (u1_struct_0 X2))) \wedge (u1_vectsp_2 \\ X0 X2 = k5_relat_1 (u1_vectsp_2 X0 X1) (k2_zfmisc_1 (u1_struct_0 \\ X2) (u1_struct_0 X0)))))))))) \end{aligned} \quad (11)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge (l1_vectsp_2 X1 X0)))))))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge ((v4_vectsp_2 X2 X0) \wedge (l1_vectsp_2 X2 X0)))))))) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge ((v13_algstr_0 X3) \wedge ((v2_rlvect_1 X3) \wedge ((v3_rlvect_1 X3) \wedge ((v4_rlvect_1 X3) \wedge ((v4_vectsp_2 X3 X0) \wedge (l1_vectsp_2 X3 X0)))))))) \Rightarrow (((m1_rmod_2 X1 X0 X2) \wedge (m1_rmod_2 X2 X0 X3)) \Rightarrow (m1_rmod_2 X1 X0 X3)))) \end{aligned}$$