

t15_jct_misc

(TMS5Um3FvUospS3Ef5VaZpU38pJ2BjMzFD4)

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Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ 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 $v1_rcomp_1 : \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k5_pscomp_1 : \iota$ be given. Let $v9_rltopsp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_xxreal_2 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_rcomp_1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow ((v9_rltopsp1 X0 (k15_euclid np_2)) \Rightarrow (v5_xxreal_2 \\ (k7_relset_1 (u1_struct_0 (k15_euclid np_2)) k1_numbers k5_pscomp_1 \\ X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((v4_pre_topc X0 (k15_euclid np_2)) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((v9_rltopsp1 \\ X0 (k15_euclid np_2)) \Rightarrow (v2_rcomp_1 (k7_relset_1 (u1_struct_0 \\ (k15_euclid np_2)) k1_numbers k5_pscomp_1 X0))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (((v5_xxreal_2 \\ X0) \wedge (v2_rcomp_1 X0)) \Rightarrow (v1_rcomp_1 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v2_pre_topc \ (k15_euclid \ X0)) \wedge \\ & ((v13_algstr_0 \ (k15_euclid \ X0)) \wedge ((v2_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v3_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v4_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v5_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v6_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v7_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v8_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 \ X0) \Rightarrow ((\neg v2_struct_0 \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v8_pre_topc \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 \ X0) \Rightarrow ((l1_rlvect_1 \ X0) \wedge (l1_pre_topc \ X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 \ X2 \ (\\ & k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (m1_subset_1 \ (k7_relset_1 \\ & X0 \ X1 \ X2 \ X3) \ (k1_zfmisc_1 \ X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \ k5_pscomp_1) \wedge ((v1_funct_2 \ k5_pscomp_1 \ (u1_struct_0 \\ & (k15_euclid \ np_2)) \ k1_numbers) \wedge (m1_subset_1 \ k5_pscomp_1 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ (u1_struct_0 \ (k15_euclid \ np_2)) \ k1_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v5_rltopsp1 \ (k15_euclid \ X0)) \wedge \\ & (l1_rltopsp1 \ (k15_euclid \ X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v8_pre_topc \\ X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((v2_compts_1 X1 X0) \Rightarrow (v4_pre_topc X1 X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow ((v2_compts_1 \\ X1 (k15_euclid X0)) \Rightarrow (v9_rltopsp1 X1 (k15_euclid X0)))) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.(((v2_compts_1 X0 (k15_euclid np_2)) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (v1_rcomp_1 \\ (k7_relset_1 (u1_struct_0 (k15_euclid np_2)) k1_numbers k5_pscomp_1 \\ X0)) \end{aligned}$$