

t22_clvect_3

(TML9v9CWup2sPcEaDR1w7wkntj5M6cz9xHp)

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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 $v2_clvect_1 : \iota \Rightarrow o$ be given. Let $v3_clvect_1 : \iota \Rightarrow o$ be given. Let $v4_clvect_1 : \iota \Rightarrow o$ be given. Let $v5_clvect_1 : \iota \Rightarrow o$ be given. Let $v2_csspace : \iota \Rightarrow o$ be given. Let $l1_csspace : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_clvect_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_clvect_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (k1_normsp_1 X0 X1 (k2_nat_1 X2 np_1) = k5_algstr_0 X0 (k2_clvect_3 X0 X1 (k2_nat_1 X2 np_1)) (k2_clvect_3 X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(m2_subset_1 (k2_nat_1 X0 X1) k1_numbers k5_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge((v2_csspace X0)\wedge(l1_csspace X0))))))))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))\Rightarrow(\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers)\Rightarrow(\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers)\Rightarrow(k3_clvect_3 X0 X1 X2 X3 = k5_algstr_0 X0 (k2_clvect_3 X0 X1 X2) (k2_clvect_3 X0 X1 X3)))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (10)$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v2_clvect_1 X0)\wedge((v3_clvect_1 X0)\wedge((v4_clvect_1 X0)\wedge((v5_clvect_1 X0)\wedge((v2_csspace X0)\wedge(l1_csspace X0))))))))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers (u1_struct_0 X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))\Rightarrow(\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers)\Rightarrow(k3_clvect_3 X0 X1 (k2_nat_1 X2 np_1) X2 = k1_normsp_1 X0 X1 (k2_nat_1 X2 np_1)))))) \end{aligned}$$