

t28_clvect_2 (TMK-
MGg4UrJXXvkbxkjZ2W5eTZBbGMVjnCn7)

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 $v2_clvect_1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_clvect_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_clvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_clvect_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $l1_clvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
& ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
& X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\
& ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (((v1_clvect_2 X1 X0) \wedge (v1_clvect_2 X2 X0)) \Rightarrow (v1_clvect_2 \\
& (k3_normsp_1 X0 X1 X2) X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
& ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
& X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (\\
& u1_struct_0 X0)) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow (((v1_clvect_2 \\
& X2 X0) \wedge (k1_clvect_2 X0 X2 = X1)) \Rightarrow ((v2_comseq_2 (k2_clvect_2 X0 \\
& (k4_normsp_1 X0 X2 X1))) \wedge (k2_seq_2 (k2_clvect_2 X0 (k4_normsp_1 \\
& X0 X2 X1)) = k6_numbers))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
& ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
& X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (((v1_clvect_2 X1 X0) \wedge (v1_clvect_2 X2 X0)) \Rightarrow (k1_clvect_2 \\
& X0 (k3_normsp_1 X0 X1 X2) = k5_algstr_0 X0 (k1_clvect_2 X0 X1) (k1_clvect_2 \\
& X0 X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(l1_csspace X0) \Rightarrow (l1_clvect_1 X0) \tag{4}$$

Assume the following.

$$\forall X0.(l1_clvect_1 X0) \Rightarrow (l2_algstr_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l2_algstr_0 \\
& X0)) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow ((v1_funct_1 (k3_normsp_1 X0 X1 X2)) \wedge ((v1_funct_2 \\
& (k3_normsp_1 X0 X1 X2) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& (k3_normsp_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\
& ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 \\
& X0) \wedge ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge \\
& ((v2_csspace X0) \wedge (l1_csspace X0)))))))))) \wedge ((v1_funct_1 X1) \wedge \\
& ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (m1_subset_1 (k1_clvect_2 X0 X1) (u1_struct_0 X0))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_clvect_1 X0) \wedge \\
& ((v3_clvect_1 X0) \wedge ((v4_clvect_1 X0) \wedge ((v5_clvect_1 X0) \wedge ((v2_csspace \\
& X0) \wedge (l1_csspace X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (\\
& u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))) \Rightarrow (((v1_clvect_2 X3 X0) \wedge ((k1_clvect_2 \\
& X0 X3 = X1) \wedge ((v1_clvect_2 X4 X0) \wedge (k1_clvect_2 X0 X4 = X2)))) \Rightarrow ((v2_comseq_2 \\
& (k2_clvect_2 X0 (k4_normsp_1 X0 (k3_normsp_1 X0 X3 X4) (k5_algstr_0 \\
& X0 X1 X2)))) \wedge (k2_seq_2 (k2_clvect_2 X0 (k4_normsp_1 X0 (k3_normsp_1 \\
& X0 X3 X4) (k5_algstr_0 X0 X1 X2))) = k6_numbers))))))
\end{aligned}$$