

t20_normsp_2

(TMQF2P4d32WMHwbWLMiAWSJEz7bQoKz38Bf)

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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 $v5_rlvect.1 : \iota \Rightarrow o$ 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 $v3_normsp.0 : \iota \Rightarrow o$ be given. Let $v4_normsp.0 : \iota \Rightarrow o$ be given. Let $v2_normsp.1 : \iota \Rightarrow o$ be given. Let $l1_normsp.1 : \iota \Rightarrow o$ 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 $k3_normsp.2 : \iota \Rightarrow \iota$ be given. Let $k4_normsp.2 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $k4_struct.0 : \iota \Rightarrow \iota$ be given. Let $r1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_algstr.0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $u1_rlvect.1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect.1 X0) \wedge (l1_pre_topc X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v3_normsp.0 \\ & X0) \wedge ((v4_normsp.0 X0) \wedge ((v2_normsp.1 X0) \wedge (l1_normsp.1 X0)))))))))) \Rightarrow \\ & ((\neg v2_struct.0 (k4_normsp.2 X0)) \wedge ((v5_rltopsp1 (k4_normsp.2 \\ & X0)) \wedge (l1_rltopsp1 (k4_normsp.2 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v2_rlvect.1 \\ & X0) \wedge ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge ((v5_rlvect.1 X0) \wedge \\ & ((v6_rlvect.1 X0) \wedge ((v7_rlvect.1 X0) \wedge ((v8_rlvect.1 X0) \wedge ((v3_normsp.0 \\ & X0) \wedge ((v4_normsp.0 X0) \wedge ((v2_normsp.1 X0) \wedge (l1_normsp.1 X0)))))))))) \Rightarrow \\ & ((\neg v2_struct.0 (k3_normsp.2 X0)) \wedge ((v2_pre_topc (k3_normsp.2 \\ & X0)) \wedge (l1_pre_topc (k3_normsp.2 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v5_rltopsp1 X1) \wedge (l1_rltopsp1 \\
& X1))) \Rightarrow ((X1 = k4_normsp_2 X0) \Leftrightarrow ((u1_struct_0 X1 = u1_struct_0 X0) \wedge \\
& ((k4_struct_0 X1 = k4_struct_0 X0) \wedge ((r1_funct_2 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X1)) (u1_struct_0 X1) (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0) (u1_algstr_0 \\
& X1) (u1_algstr_0 X0)) \wedge ((r1_funct_2 (k2_zfmisc_1 k1_numbers (\\
& u1_struct_0 X1)) (u1_struct_0 X1) (k2_zfmisc_1 k1_numbers (u1_struct_0 \\
& X0)) (u1_struct_0 X0) (u1_rlvect_1 X1) (u1_rlvect_1 X0)) \wedge (u1_pre_topc \\
& X1 = u1_pre_topc (k3_normsp_2 X0)))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in u1_pre_topc X0))) \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v3_normsp_0 \\
& X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge (l1_normsp_1 X0)))))))))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_normsp_2 \\
& X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
& (k4_normsp_2 X0)))) \Rightarrow ((X1 = X2) \Rightarrow ((v3_pre_topc X1 (k3_normsp_2 \\
& X0)) \Leftrightarrow (v3_pre_topc X2 (k4_normsp_2 X0))))))
\end{aligned}$$