

t73_vectsp_4

(TMXewvAWEnjJLYVr3i88fQDhrXw2YdFCe8z)

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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 $v8_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_vectsp.4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_vectsp.4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $k3_vectsp.4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct.0 : \iota \Rightarrow \iota$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_vectsp.4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $v7_vectsp.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v3_group.1 \\
 & X0) \wedge ((v4_vectsp.1 X0) \wedge ((v5_vectsp.1 X0) \wedge ((v2_rlvect.1 X0) \wedge \\
 & ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge (l6_algstr.0 X0)))))))))) \Rightarrow \\
 & (\forall X1.((\neg v2_struct.0 X1) \wedge ((v13_algstr.0 X1) \wedge ((v8_vectsp.1 \\
 & X1 X0) \wedge ((v9_vectsp.1 X1 X0) \wedge ((v10_vectsp.1 X1 X0) \wedge ((v11_vectsp.1 \\
 & X1 X0) \wedge ((v2_rlvect.1 X1) \wedge ((v3_rlvect.1 X1) \wedge ((v4_rlvect.1 X1) \wedge \\
 & (l1_vectsp.1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_vectsp.4 X2 X0 X1) \Rightarrow \\
 & (k3_vectsp.4 X0 X1 (k4_struct.0 X1) X2 = u1_struct.0 X2))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct.0 X0) \wedge ((v13_algstr.0 X0) \wedge ((v3_group.1 \\
 & X0) \wedge ((v4_vectsp.1 X0) \wedge ((v5_vectsp.1 X0) \wedge ((v2_rlvect.1 X0) \wedge \\
 & ((v3_rlvect.1 X0) \wedge ((v4_rlvect.1 X0) \wedge (l6_algstr.0 X0)))))))))) \Rightarrow \\
 & (\forall X1.((\neg v2_struct.0 X1) \wedge ((v13_algstr.0 X1) \wedge ((v8_vectsp.1 \\
 & X1 X0) \wedge ((v9_vectsp.1 X1 X0) \wedge ((v10_vectsp.1 X1 X0) \wedge ((v11_vectsp.1 \\
 & X1 X0) \wedge ((v2_rlvect.1 X1) \wedge ((v3_rlvect.1 X1) \wedge ((v4_rlvect.1 X1) \wedge \\
 & (l1_vectsp.1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset.1 X2 (u1_struct.0 \\
 & X1) \Rightarrow (\forall X3.(m1_vectsp.4 X3 X0 X1) \Rightarrow (X2 \in k3_vectsp.4 X0 X1 \\
 & X2 X3))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
& ((v3_group_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1))))))) \Rightarrow \\
& (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 \\
& X2 X1) \wedge ((v9_vectsp_1 X2 X1) \wedge ((v10_vectsp_1 X2 X1) \wedge ((v11_vectsp_1 \\
& X2 X1) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\
& (l1_vectsp_1 X2 X1)))))))))) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
& X2)) \Rightarrow (\forall X4. (m1_vectsp_4 X4 X1 X2) \Rightarrow ((X0 \in k3_vectsp_4 X1 X2 \\
& X3 X4) \Leftrightarrow (\exists X5. (m1_subset_1 X5 (u1_struct_0 X2)) \wedge ((r1_struct_0 \\
& X4 X5) \wedge (X0 = k3_rlvect_1 X2 X3 X5))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
& ((v3_group_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1))))))) \Rightarrow \\
& (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 \\
& X2 X1) \wedge ((v9_vectsp_1 X2 X1) \wedge ((v10_vectsp_1 X2 X1) \wedge ((v11_vectsp_1 \\
& X2 X1) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\
& (l1_vectsp_1 X2 X1)))))))))) \Rightarrow ((r1_struct_0 (k1_vectsp_4 X1 X2) \\
& X0) \Leftrightarrow (X0 = k4_struct_0 X2))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \exists X1. m1_subset_1 X1 X0 \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2_struct_0 \\
& X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge \\
& ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge (l6_algstr_0 X0)))))))) \wedge (((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 \\
& X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge (l1_vectsp_1 X1 X0)))))))))) \wedge ((m1_subset_1 \\
& X2 (u1_struct_0 X1)) \wedge (m1_vectsp_4 X3 X0 X1))) \Rightarrow (m1_subset_1 (\\
& k3_vectsp_4 X0 X1 X2 X3) (k1_zfmisc_1 (u1_struct_0 X1)))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\
& ((v3_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 \\
& X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \wedge \\
& ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v8_vectsp_1 X1 X0) \wedge \\
& ((v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 X1 \\
& X0) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\
& (l1_vectsp_1 X1 X0)))))) \Rightarrow ((v7_vectsp_1 (k1_vectsp_4 X0 \\
& X1) X0) \wedge (m1_vectsp_4 (k1_vectsp_4 X0 X1) X0 X1))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v3_group_1 \\
& X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1. ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v8_vectsp_1 \\
& X1 X0) \wedge (v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 \\
& X1 X0) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\
& (l1_vectsp_1 X1 X0)))))) \Rightarrow (\forall X2. (m1_vectsp_4 X2 X0 X1) \Rightarrow \\
& (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow \\
& ((m2_vectsp_4 X3 X0 X1 X2) \Leftrightarrow (\exists X4. (m1_subset_1 X4 (u1_struct_0 \\
& X1)) \wedge (X3 = k3_vectsp_4 X0 X1 X4 X2))))))
\end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v3_group_1 \\
& X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1. ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v8_vectsp_1 \\
& X1 X0) \wedge (v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 \\
& X1 X0) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\
& (l1_vectsp_1 X1 X0)))))) \Rightarrow (\forall X2. (m1_vectsp_4 X2 X0 X1) \Rightarrow \\
& (m2_vectsp_4 (u1_struct_0 X2) X0 X1 X2))
\end{aligned}$$