

t64_vectsp_4 (TMNpKGxQjQJsg2yFcKAS51bu34zxUBjHtiZ)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_vectsp_4 X3 X0 X1) \Rightarrow (X2 \in k3_vectsp_4 X0 X1 X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))))))) \Rightarrow \\ & (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 X2 X1) \wedge ((v9_vectsp_1 X2 X1) \wedge ((v10_vectsp_1 X2 X1) \wedge ((v11_vectsp_1 X2 X1) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge (l1_vectsp_1 X2 X1)))))))))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (\forall X4.(m1_vectsp_4 X4 X1 X2) \Rightarrow ((X0 \in k3_vectsp_4 X1 X2 X3 X4) \Leftrightarrow (\exists X5.(m1_subset_1 X5 (u1_struct_0 X2)) \wedge ((r1_struct_0 X4 X5) \wedge (X0 = k3_rlvect_1 X2 X3 X5)))))) \end{aligned} \tag{2}$$

Theorem 1

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