

l38_scmring2 (TMKZNkcfY-
Gorcs1dXkaTHoLWb9AHTny8mSd)

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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 $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmring2 : \iota \Rightarrow \iota$ be given. Let $v2_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_2 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k8_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_scmring2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given.

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_compos_1 (k1_scmring2 X0))) \Leftrightarrow \\
& (\neg (X1 \neq k3_xtuple_0 k6_numbers k1_xboole_0 k1_xboole_0) \wedge ((\forall X2. \\
& ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow \\
& (\forall X3.((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 (k1_scmring2 \\
& X0)))) \Rightarrow (X1 \neq k3_scmring2 X0 X2 X3)) \wedge ((\forall X2.((v1_ami_2 X2) \wedge \\
& (m1_subset_1 X2 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow (\forall X3. \\
& ((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow \\
& (X1 \neq k4_scmring2 X0 X2 X3)) \wedge ((\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 \\
& X2 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow (\forall X3.((v1_ami_2 X3) \wedge \\
& (m1_subset_1 X3 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow (X1 \neq k5_scmring2 \\
& X0 X2 X3)) \wedge ((\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 \\
& (k1_scmring2 X0)))) \Rightarrow (\forall X3.((v1_ami_2 X3) \wedge (m1_subset_1 \\
& X3 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow (X1 \neq k6_scmring2 X0 X2 X3))) \wedge \\
& ((\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (X1 \neq k8_scmring2 X0 \\
& X2)) \wedge ((\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 \\
& (k1_scmring2 X0)))) \Rightarrow (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow \\
& (X1 \neq k9_scmring2 X0 X3 X2)) \wedge (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 \\
& X2 (u1_struct_0 (k1_scmring2 X0)))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0) \Rightarrow (X1 \neq k7_scmring2 X0 X2 X3))))))))))))) \tag{1}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \tag{2} \\
& (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow (\neg v2_extpro_1 (k8_scmring2 \\
& X0 X1) np_2 (k1_scmring2 X0)))
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 \\
& X0)))))))) \wedge (((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\
& X0)))) \wedge (m1_subset_1 X2 k5_numbers))) \Rightarrow (\neg v2_extpro_1 (k9_scmring2 \\
& X0 X2 X1) np_2 (k1_scmring2 X0)) \tag{3}
\end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0))))\wedge((v1_ami_2 X2)\wedge(m1_subset_1 X2 (u1_struct_0 (k1_scmring2 \\ & X0))))))\Rightarrow(\neg v2_extpro_1 (k6_scmring2 X0 X1 X2) np_2 (k1_scmring2 \\ & X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0))))\wedge((v1_ami_2 X2)\wedge(m1_subset_1 X2 (u1_struct_0 (k1_scmring2 \\ & X0))))))\Rightarrow(\neg v2_extpro_1 (k5_scmring2 X0 X1 X2) np_2 (k1_scmring2 \\ & X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0))))\wedge((v1_ami_2 X2)\wedge(m1_subset_1 X2 (u1_struct_0 (k1_scmring2 \\ & X0))))))\Rightarrow(\neg v2_extpro_1 (k4_scmring2 X0 X1 X2) np_2 (k1_scmring2 \\ & X0)) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0))))\wedge((v1_ami_2 X2)\wedge(m1_subset_1 X2 (u1_struct_0 (k1_scmring2 \\ & X0))))))\Rightarrow(\neg v2_extpro_1 (k3_scmring2 X0 X1 X2) np_2 (k1_scmring2 \\ & X0)) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\wedge(((v1_ami_2 X1)\wedge(m1_subset_1 X1 (u1_struct_0 (k1_scmring2 \\ & X0))))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(\neg v2_extpro_1 (k7_scmring2 \\ & X0 X1 X2) np_2 (k1_scmring2 X0)) \end{aligned} \tag{8}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge (\\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_compos_1 (k1_scmring2 X0))) \Rightarrow \\ & ((v2_extpro_1 X1 \text{ np_2 } (k1_scmring2 X0)) \Rightarrow (X1 = k3_xtuple_0 k6_numbers \\ & k1_xboole_0 k1_xboole_0))) \end{aligned}$$