

t32_vectsp10
(TMQuDhbQacxERCZutz2ECgg64QCjxeqwr1H)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k4_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \wedge \\
& ((\neg v2_struct_0 X1) \wedge (l1_vectsp_1 X1 X0))) \Rightarrow (\exists X2. (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))) \wedge \\
& ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge ((v5_relat_1 \\
& X2 (u1_struct_0 X0)) \wedge ((v1_funct_1 X2) \wedge ((v3_funct_1 X2) \wedge ((\neg v1_xboole_0 \\
& X2) \wedge ((v1_partfun1 X2 (u1_struct_0 X1)) \wedge (v1_funct_2 X2 (u1_struct_0 \\
& X1) (u1_struct_0 X0))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l2_algstr_0 \\ & X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_vectsp_1 X1 X0))\wedge((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))\Rightarrow \\ & ((v1_funct_1 (k4_hahnban1 X0 X1 X2))\wedge((v1_funct_2 (k4_hahnban1 \\ & X0 X1 X2) (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (k4_hahnban1 \\ & X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\ & X0)\wedge(l2_algstr_0 X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_vectsp_1 X1 X0))\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 \\ & X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X1) (u1_struct_0 X0))))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 (\\ & u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))\Rightarrow((v1_funct_1 \\ & (k3_hahnban1 X0 X1 X2 X3))\wedge((v1_funct_2 (k3_hahnban1 X0 X1 X2 X3) \\ & (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 (k3_hahnban1 \\ & X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 \\ & X0)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0))\Rightarrow(m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l2_algstr_0 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_vectsp_1 X1 X0))\Rightarrow(\forall X2.((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0))))))\Rightarrow \\ & (\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X1) \\ & (u1_struct_0 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X0))))))\Rightarrow(k5_hahnban1 X0 X1 X2 X3 = \\ & k3_hahnban1 X0 X1 X2 (k4_hahnban1 X0 X1 X3)))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_vectsp_1 X1 X0)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow ((X3 = k4_hahnban1 X0 X1 \\
& X2) \Leftrightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (k3_funct_2 \\
& (u1_struct_0 X1) (u1_struct_0 X0) X3 X4 = k4_algstr_0 X0 (k3_funct_2 \\
& (u1_struct_0 X1) (u1_struct_0 X0) X2 X4))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (l1_vectsp_1 X1 X0)) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow (\forall X4.((v1_funct_1 \\
& X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\
& ((X4 = k3_hahnban1 X0 X1 X2 X3) \Leftrightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& X1)) \Rightarrow (k3_funct_2 (u1_struct_0 X1) (u1_struct_0 X0) X4 X5 = k1_algstr_0 \\
& X0 (k3_funct_2 (u1_struct_0 X1) (u1_struct_0 X0) X2 X5) (k3_funct_2 \\
& (u1_struct_0 X1) (u1_struct_0 X0) X3 X5))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l2_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k5_algstr_0 \\
& X0 X1 X2 = k1_algstr_0 X0 X1 (k4_algstr_0 X0 X2)))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 \\
& X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0))))
\end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_vectsp_1 X1 X0)) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X1) (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) \\ & (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X0)))))) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 (u1_struct_0 X1)) \Rightarrow (k3_funct_2 (u1_struct_0 X1) (u1_struct_0 \\ & X0) (k5_hahnban1 X0 X1 X2 X3) X4 = k5_algstr_0 X0 (k3_funct_2 (u1_struct_0 \\ & X1) (u1_struct_0 X0) X2 X4) (k3_funct_2 (u1_struct_0 X1) (u1_struct_0 \\ & X0) X3 X4)))))) \end{aligned}$$