

t8_bhsp_4 (TMFtndveE- JKHysr3gXCCNXnSurz8PYxCLDb)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. 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 $v2_bhsp_1 : \iota \Rightarrow o$ be given. Let $l1_bhsp_1 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_bhsp_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_bhsp_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_bhsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_bhsp_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_bhsp_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhsp_1 \\
& X0) \wedge (l1_bhsp_1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 k1_numbers) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow ((v1_bhsp_2 X2 X0) \Rightarrow (v1_bhsp_2 (k5_normsp_1 X0 X2 X1) \\
& X0))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. ((\neg v2_struct_0 \\
& X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\
& ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))) \Rightarrow (\forall X2. ((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X1)))))) \Rightarrow \\
& (r2_funct_2 k5_numbers (u1_struct_0 X1) (k1_bhsp_4 X1 (k5_normsp_1 \\
& X1 X2 X0)) (k5_normsp_1 X1 (k1_bhsp_4 X1 X2) X0))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhspl_1 \\
& X0) \wedge (l1_bhspl_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow ((v1_bhspl_2 X2 X0) \Rightarrow (k1_bhspl_2 X0 (k5_normsp_1 X0 X2 X1) = \\
& k1_rlvect_1 X0 (k1_bhspl_2 X0 X2) X1)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\
& X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(l1_rlvect_1 X0) \Rightarrow (l2_algstr_0 X0) \tag{5}$$

Assume the following.

$$\forall X0.(l1_bhspl_1 X0) \Rightarrow (l1_rlvect_1 X0) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge (l1_rlvect_1 \\
& X0)) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \wedge (m1_subset_1 X2 k1_numbers)) \Rightarrow ((v1_funct_1 (k5_normsp_1 \\
& X0 X1 X2)) \wedge ((v1_funct_2 (k5_normsp_1 X0 X1 X2) k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 (k5_normsp_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \wedge \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 X0)) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow ((v1_funct_1 (k1_bhspl_4 X0 X1)) \wedge ((v1_funct_2 (k1_bhspl_4 \\
& X0 X1) k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 (k1_bhspl_4 X0 \\
& X1) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhs_1 \\
& X0) \wedge (l1_bhs_1 X0)))))))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& ((v1_funct_2 X1 \ k5_numbers \ (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 X0)))))) \Rightarrow \\
& (k2_bhs_4 X0 \ X1 = k1_bhs_2 X0 \ (k1_bhs_4 X0 \ X1)))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
& ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge ((v2_bhs_1 \\
& X0) \wedge (l1_bhs_1 X0)))))))))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& ((v1_funct_2 X1 \ k5_numbers \ (u1_struct_0 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 X0)))))) \Rightarrow \\
& ((v1_bhs_4 X1 \ X0) \Leftrightarrow (v1_bhs_2 \ (k1_bhs_4 X0 \ X1) \ X0)))
\end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 \ k1_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\
& X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\
& ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\
& X1) \wedge ((v8_rlvect_1 X1) \wedge ((v2_bhs_1 X1) \wedge (l1_bhs_1 X1)))))))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 \ k5_numbers \ (u1_struct_0 \\
& X1)) \wedge (m1_subset_1 X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ (u1_struct_0 \\
& X1)))))) \Rightarrow ((v1_bhs_4 X2 \ X1) \Rightarrow ((v1_bhs_4 \ (k5_normsp_1 \ X1 \ X2 \ X0) \\
& X1) \wedge (k2_bhs_4 X1 \ (k5_normsp_1 \ X1 \ X2 \ X0) = k1_rlvect_1 X1 \ (k2_bhs_4 \\
& X1 \ X2) \ X0))))))
\end{aligned}$$