

l55_afvect0
(TMSNco938ES5N1JPfttsHDh1zqt9PSJ8etX)

October 27, 2020

Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_afvect0 : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_afvect0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g2_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $v8_algstr_0 : \iota \Rightarrow o$ be given. Let $k3_afvect0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_afvect0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X1 X3) \Rightarrow (X2 = X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1) \wedge ((v1_funct_2 \\ X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k2_zfmisc_1 X0 X0) X0)))))) \wedge (m1_subset_1 X2 X0)) \Rightarrow (\forall X3. \\ \forall X4.\forall X5.(g2_algstr_0 X0 X1 X2 = g2_algstr_0 X3 X4 X5) \Rightarrow \\ ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge \\ (l1_analoaf X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((v8_algstr_0 \\ (k5_afvect0 X0 X1)) \wedge (l2_algstr_0 (k5_afvect0 X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge \\ & (l1_analoaf X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((v1_funct_1 \\ & (k3_afvect0 X0 X1)) \wedge ((v1_funct_2 (k3_afvect0 X0 X1) (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & (k3_afvect0 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v7_struct_0 \\ & X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\ & X0)) \wedge ((m1_subset_1 X2 (u1_struct_0 X0)) \wedge (m1_subset_1 X3 (u1_struct_0 \\ & X0)))))) \Rightarrow (m1_subset_1 (k2_afvect0 X0 X1 X2 X3) (u1_struct_0 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_afvect0 \\ & X0 X1 = g2_algstr_0 (u1_struct_0 X0) (k3_afvect0 X0 X1) X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (k4_struct_0 X0 = u2_struct_0 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 (u1_struct_0 X0) \\ & (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) \\ & (u1_struct_0 X0)))))) \Rightarrow ((X2 = k3_afvect0 X0 X1) \Leftrightarrow (\forall X3. (m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (k5_binop_1 (u1_struct_0 X0) X2 X3 X4 = k2_afvect0 X0 X1 X3 X4)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & ((X4 = k2_afvect0 X0 X1 X2 X3) \Leftrightarrow (r2_analoaf X0 X1 X2 X3 X4)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_algstr_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k1_algstr_0 \\ & X0 X1 X2 = k5_binop_1 (u1_struct_0 X0) (u1_algstr_0 X0) X1 X2))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((v8_algstr_0 X0) \Rightarrow (X0 = g2_algstr_0 (u1_struct_0 X0) (u1_algstr_0 X0) (u2_struct_0 X0))) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect0 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k5_afvect0 X0 X1))) \Rightarrow (k1_algstr_0 \\ & (k5_afvect0 X0 X1) X2 (k4_struct_0 (k5_afvect0 X0 X1)) = X2))) \end{aligned}$$