

t38_algstr_4 (TMTC- CPUxg8ZToTjdJfMUR2cN6V9W3Cwa1fi)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_algstr_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k14_algstr_4 : \iota \Rightarrow \iota$ be given. Let $k16_algstr_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $g3_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_algstr_4 : \iota \Rightarrow \iota$ be given. Let $k13_algstr_4 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((k1_relset_1 X0 X2 = X0) \Rightarrow \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. k11_algstr_4 X0 np_1 = X0 \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow(k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow((k1_relset_1 (k11_algstr_4 X0 \\ & np_1) (k16_algstr_4 X0 np_1) = X0)\wedge(\forall X1.(X1 \in X0)\Rightarrow(k1_funct_1 \\ & (k16_algstr_4 X0 np_1) X1 = k4_tarski X1 np_1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ & X1)\wedge(((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge((v1_funct_2 \\ & X4 X1 X2)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 X2))))))\Rightarrow \\ & ((v1_funct_1 (k3_relat_1 X3 X4)\wedge(v1_funct_2 (k3_relat_1 X3 X4) \\ & X0 X2)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow((v1_funct_1 (k1_partfun1 X0 X1 X2 X3 X4 X5))\wedge(m1_subset_1 \\ & (k1_partfun1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 X0 X3)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v7_ordinal1 X1)\Rightarrow((v1_funct_1 (k16_algstr_4 \\ & X0 X1))\wedge((v1_funct_2 (k16_algstr_4 X0 X1) (k11_algstr_4 X0 X1) \\ & (u1_struct_0 (k14_algstr_4 X0)))\wedge(m1_subset_1 (k16_algstr_4 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k11_algstr_4 X0 X1) (u1_struct_0 \\ & (k14_algstr_4 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.k14_algstr_4 X0 = g3_algstr_0 (k12_algstr_4 X0) (k13_algstr_4 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v1_funct_1 (k1_partfun1 \\ & X0 X1 (k11_algstr_4 X1 np_1) (u1_struct_0 (k14_algstr_4 X1)) X2 \\ & (k16_algstr_4 X1 np_1))) \wedge ((v1_funct_2 (k1_partfun1 X0 X1 (k11_algstr_4 \\ & X1 np_1) (u1_struct_0 (k14_algstr_4 X1)) X2 (k16_algstr_4 X1 np_1)) \\ & X0 (u1_struct_0 (k14_algstr_4 X1))) \wedge (m1_subset_1 (k1_partfun1 \\ & X0 X1 (k11_algstr_4 X1 np_1) (u1_struct_0 (k14_algstr_4 X1)) X2 \\ & (k16_algstr_4 X1 np_1)) (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 \\ & (k14_algstr_4 X1)))))))))) \end{aligned}$$