

t51_algspec1

(TMR15jLMcC5Mv7X4Bmc8hTtP22SU5tvMQHV)

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Let $v1_instalg1 : \iota \Rightarrow o$ be given. Let $l1_msualg1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $m2_algspec1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_msualg1 : \iota \Rightarrow \iota$ be given. Let $u2_msualg1 : \iota \Rightarrow \iota$ be given. Let $m1_instalg1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ 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 $k1_zfmisc1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.r1_tarski k1_xboole_0 X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_instalg1 X0) \wedge (l1_msualg1 X0)) \Rightarrow (\forall X1. \\ ((v1_instalg1 X1) \wedge (l1_msualg1 X1)) \Rightarrow (((r1_tarski (u1_struct_0 \\ X1) (u1_struct_0 X0)) \wedge ((r1_tarski (u1_msualg1 X1) (u1_msualg1 \\ X0)) \wedge (r1_tarski (u2_msualg1 X1) (u2_msualg1 X0)))))) \Rightarrow (m1_instalg1 \\ X1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.((v11_struct_0 X0) \wedge (l5_struct_0 X0)) \Rightarrow (v1_xboole_0 \\ (u4_struct_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_msualg_1 X0) \Rightarrow & ((v1_funct_1 (u2_msualg_1 X0)) \wedge \\ & ((v1_funct_2 (u2_msualg_1 X0) (u4_struct_0 X0) (u1_struct_0 X0)) \wedge \\ & (m1_subset_1 (u2_msualg_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (u4_struct_0 \\ & X0) (u1_struct_0 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_msualg_1 X0) \Rightarrow & ((v1_funct_1 (u1_msualg_1 X0)) \wedge \\ & ((v1_funct_2 (u1_msualg_1 X0) (u4_struct_0 X0) (k3_finseq_2 (\\ & u1_struct_0 X0))) \wedge (m1_subset_1 (u1_msualg_1 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u4_struct_0 X0) (k3_finseq_2 (u1_struct_0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l5_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0) \Rightarrow (l5_struct_0 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_instalg1 X0) \wedge (l1_msualg_1 X0)) \Rightarrow & (\forall X1. \\ & ((v1_instalg1 X1) \wedge (l1_msualg_1 X1)) \Rightarrow ((m2_algspec1 X1 X0) \Leftrightarrow (m1_instalg1 \\ & X0 X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Leftrightarrow (v1_xboole_0 (u1_struct_0 X0))) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow & (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 \\ & X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0) \Rightarrow (((v2_struct_0 X0) \wedge (v1_instalg1 X0)) \Rightarrow (v11_struct_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (14)$$

Theorem 1

$$\forall X0.((v1_instalg1\ X0)\wedge(l1_msualg_1\ X0))\Rightarrow(\forall X1.((v1_instalg1\ X1)\wedge(l1_msualg_1\ X1))\Rightarrow((v2_struct_0\ X0)\Rightarrow(m2_algspec1\ X1\ X0)))$$