

t3_rsspace

(TMJAZBjb2g9hj9dFJE7RdRSBt1paEPwDneT)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $g1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rsspace : \iota$ be given. Let $k6_rsspace : \iota$ be given. Let $k4_rsspace : \iota$ be given. Let $k5_rsspace : \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_rsspace : \iota \Rightarrow \iota$ be given. 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rsspace : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $u1_rlvect_1 : \iota \Rightarrow \iota$ be given. Let $u2_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X1 \\ & X0) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0) X0) \\ & X0)))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (k2_zfmisc_1 k1_numbers \\ & X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers X0) X0)))))) \Rightarrow (\forall X4. \forall X5. \forall X6. \forall X7. \\ & (g1_rlvect_1 X0 X1 X2 X3 = g1_rlvect_1 X4 X5 X6 X7) \Rightarrow ((X0 = X4) \wedge ((X1 = \\ & X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_subset_1 X1 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 \\ & X0 X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 (k2_zfmisc_1 \\ & k1_numbers X0) X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers X0) X0))))))\Rightarrow((\neg v2_struct_0 (g1_rlvect_1 \\ & X0 X1 X2 X3))\wedge(v1_rlvect_1 (g1_rlvect_1 X0 X1 X2 X3))) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (4)$$

Assume the following.

$$m1_subset_1 k6_rsspace k1_rsspace \quad (5)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k5_rsspace)\wedge((v1_funct_2 k5_rsspace (k2_zfmisc_1 \\ & k1_numbers k1_rsspace) k1_rsspace)\wedge(m1_subset_1 k5_rsspace \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_rsspace) \\ & k1_rsspace)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k4_rsspace)\wedge((v1_funct_2 k4_rsspace (k2_zfmisc_1 \\ & k1_rsspace k1_rsspace) k1_rsspace)\wedge(m1_subset_1 k4_rsspace \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k1_rsspace k1_rsspace) \\ & k1_rsspace)))) \end{aligned} \quad (7)$$

Assume the following.

$$\neg v1_xboole_0 k1_rsspace \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X1 \\ & X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) \\ & X0))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 (k2_zfmisc_1 k1_numbers \\ & X0) X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers X0) X0))))))\Rightarrow((v1_rlvect_1 (g1_rlvect_1 X0 X1 X2 X3))\wedge \\ & (l1_rlvect_1 (g1_rlvect_1 X0 X1 X2 X3))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 (k2_zfmisc_1 k1_numbers \\ & k1_rsspace) k1_rsspace)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_rsspace) k1_rsspace))))\Rightarrow((X0 = k5_rsspace)\Leftrightarrow \\ & (\forall X1.\forall X2.((X1 \in k1_numbers)\wedge(X2 \in k1_rsspace))\Rightarrow \\ & (k1_binop_1 X0 X1 X2 = k26_valued_1 k5_numbers k1_numbers (k2_rsspace \\ & X2) (k3_rsspace X1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(X0 \in k1_numbers) \Rightarrow (k3_rssize X0 = X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_rlvect_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow \\ (k1_rlvect_1 X0 X1 X2 = k1_binop_1 (u1_rlvect_1 X0) X2 X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_rlvect_1 X0) \Rightarrow ((v1_rlvect_1 X0) \Rightarrow (X0 = g1_rlvect_1 \\ (u1_struct_0 X0) (u2_struct_0 X0) (u1_algstr_0 X0) (u1_rlvect_1 \\ X0))) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 (g1_rlvect_1 k1_rssize k6_rssize k4_rssize \\ k5_rssize))) \Rightarrow (k1_rlvect_1 (g1_rlvect_1 k1_rssize k6_rssize \\ k4_rssize k5_rssize) X1 X0 = k26_valued_1 k5_numbers k1_numbers \\ (k2_rssize X1) X0)) \end{aligned}$$