

t1_complsp2

(TMFN6A7PyemxstaWVsWSxsBo5wmZi6j5Yyz)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_seq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_matrix_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 k2_numbers) \wedge (m1_finseq_1 X1 k2_numbers)) \Rightarrow (k9_seq_4 X0 X1 = k1_valued_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (k9_matrix_5 X0 X1 = k1_funct_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (v1_xcmplx_0 (k1_funct_1 X0 X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 \\ X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_valued_0 X1))))\Rightarrow \\ ((v1_relat_1 (k1_valued_1 X0 X1))\wedge((v1_funct_1 (k1_valued_1 \\ X0 X1))\wedge(v1_valued_0 (k1_valued_1 X0 X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ (v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_finseq_1 X0 k2_numbers)\wedge(m1_finseq_1 \\ X1 k2_numbers))\Rightarrow(m2_finseq_1 (k9_seq_4 X0 X1) k2_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 \\ X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_valued_0 X1))))\Rightarrow \\ ((v1_relat_1 (k1_valued_1 X0 X1))\wedge(v1_funct_1 (k1_valued_1 X0 \\ X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_valued_0 \\ X1)))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\Rightarrow((X2 = k1_valued_1 \\ X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k3_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 \\ X1))\wedge(\forall X3.(X3 \in k9_xtuple_0 X2)\Rightarrow(k1_funct_1 X2 X3 = k2_xcmplx_0 \\ (k1_funct_1 X0 X3) (k1_funct_1 X1 X3))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_finseq_1 X0 k2_numbers)\wedge(m1_finseq_1 \\ X1 k2_numbers))\Rightarrow(k9_seq_4 X0 X1 = k9_seq_4 X1 X0) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(\\ k3_binop_2 X0 X1 = k3_binop_2 X1 X0) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v5_relat_1 X0 k2_numbers))\Rightarrow((v1_relat_1 X0)\wedge(v1_valued_0 X0)) \quad (16)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.(m2_finseq_1 \\ &X1 k2_numbers)\Rightarrow(\forall X2.(m2_finseq_1 X2 k2_numbers)\Rightarrow((X0 \in \\ &k4_finseq_1 (k9_seq_4 X1 X2))\Rightarrow(k9_matrix_5 (k9_seq_4 X1 X2) X0 = \\ &k3_binop_2 (k9_matrix_5 X1 X0) (k9_matrix_5 X2 X0)))))) \end{aligned}$$