

t56_complsp2 (TMKPMEN- wxKq2s1Ywt8Uvbu4oyxkmfhFuoY7)

October 27, 2020

Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_finseqop : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_binop_2 : \iota$ be given. Let $k31_binop_2 : \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_matrix_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k7_binop_2 : \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k1_binop_2 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k2_numbers k2_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k1_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X2.(m2_finseq_1 X2 k2_numbers) \Rightarrow (\forall X3.(m2_finseq_1 \\
& X3 k1_numbers) \Rightarrow (((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge (\forall X4. \\
& (m1_subset_1 X4 k5_numbers) \Rightarrow ((X4 \in k4_finseq_1 X2) \Rightarrow (k9_matrix_5 \\
& X0 (k9_matrix_5 X2 X4) = k1_seq_1 X1 (k1_seq_1 X3 X4)))))) \Rightarrow (k4_finseqop \\
& k2_numbers k2_numbers X2 X0 = k4_finseqop k1_numbers k1_numbers \\
& X3 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k7_binop_2 X0 = k4_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k1_binop_2 X0 = k4_xcmplx_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (v1_xreal_0 (k1_funct_1 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (v1_xcmplx_0 (k1_funct_1 X0 X1)) \quad (8)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (9)$$

Assume the following.

$$v1_membered\ k2_numbers \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (12)$$

Assume the following.

$$(v1_funct_1\ k31_binop_2) \wedge ((v1_funct_2\ k31_binop_2\ k1_numbers\ k1_numbers) \wedge (m1_subset_1\ k31_binop_2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers\ k1_numbers)))) \quad (13)$$

Assume the following.

$$(v1_funct_1\ k25_binop_2) \wedge ((v1_funct_2\ k25_binop_2\ k2_numbers\ k2_numbers) \wedge (m1_subset_1\ k25_binop_2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k2_numbers\ k2_numbers)))) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k1_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow \\ & ((X0 = k31_binop_2) \Leftrightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k1_funct_1 \\ & X0 X1 = k7_binop_2 X1))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k2_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers)))))) \Rightarrow \\ & ((X0 = k25_binop_2) \Leftrightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k1_funct_1 \\ & X0 X1 = k1_binop_2 X1))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. (v3_membered X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. (v1_membered X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 k2_numbers) \Rightarrow (\forall X1. (m2_finseq_1 \\ & X1 k1_numbers) \Rightarrow (((X0 = X1) \wedge (k3_finseq_1 X0 = k3_finseq_1 X1)) \Rightarrow \\ & (k4_finseqop k2_numbers k2_numbers X0 k25_binop_2 = k4_finseqop \\ & k1_numbers k1_numbers X1 k31_binop_2))) \end{aligned}$$