

t53_complsp2 (TMdMwb- WhG899jL9ST8o8teEVgdnF3KNQqmE)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k12_seq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow (\\ & k24_valued_1 X0 (k3_xcmplx_0 X1 X2) = k24_valued_1 (k24_valued_1 \\ & X0 X2) X1))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ k5_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 k2_numbers) \wedge (v1_xcmplx_0 \\ X1)) \Rightarrow (k12_seq_4 X0 X1 = k24_valued_1 X0 X1) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\ (v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k2_numbers)\wedge(v1_xcmplx_0 X1))\Rightarrow(m2_finseq_1 (k12_seq_4 X0 X1) k2_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k2_numbers)\Rightarrow(v1_valued_0 X0) \quad (8)$$

Theorem 1

$$\forall X0.(m2_finseq_1 X0 k2_numbers)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(\forall X2.(v1_xcmplx_0 X2)\Rightarrow(k12_seq_4 (k12_seq_4 X0 X2) X1 = k12_seq_4 X0 (k5_binop_2 X1 X2))))$$