

## t2\_complsp2

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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  $k10\_seq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_matrix\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k45\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_valued\_0 \\ & X1)))) \Rightarrow (\forall X2.(X2 \in k9\_xtuple\_0 (k45\_valued\_1 X0 X1)) \Rightarrow (k1\_funct\_1 \\ & (k45\_valued\_1 X0 X1) X2 = k6\_xcmplx\_0 (k1\_funct\_1 X0 X2) (k1\_funct\_1 \\ & X1 X2)))) \end{aligned} \tag{1}$$

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.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k4\_binop\_2 X0 X1 = k6\_xcmplx\_0 X0 X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_finseq\_1 X0 k2\_numbers)\wedge(m1\_finseq\_1 X1 k2\_numbers))\Rightarrow(k10\_seq\_4 X0 X1 = k45\_valued\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\wedge((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_valued\_0 X1))))\Rightarrow((v1\_relat\_1 (k45\_valued\_1 X0 X1))\wedge((v1\_funct\_1 (k45\_valued\_1 X0 X1))\wedge(v1\_valued\_0 (k45\_valued\_1 X0 X1)))) \quad (7)$$

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.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_finseq\_1 X0 k2\_numbers)\wedge(m1\_finseq\_1 X1 k2\_numbers))\Rightarrow(m2\_finseq\_1 (k10\_seq\_4 X0 X1) k2\_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k2\_numbers)\Rightarrow(v1\_valued\_0 X0) \quad (12)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.(m2\_finseq\_1 X1 k2\_numbers)\Rightarrow(\forall X2.(m2\_finseq\_1 X2 k2\_numbers)\Rightarrow((X0 \in k4\_finseq\_1 (k10\_seq\_4 X1 X2))\Rightarrow(k9\_matrix\_5 (k10\_seq\_4 X1 X2) X0 = k4\_binop\_2 (k9\_matrix\_5 X1 X0) (k9\_matrix\_5 X2 X0))))))$$