t6_topalg_1 (TMV526iDFc6qK1aJLfpGza3KQxuhkcERXX8)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $k10\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ 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 $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k30\_valued\_1 : \iota \Rightarrow \iota$ be given. Let $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0\ X0))) \Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1) \Rightarrow (\forall X2.(v1\_xcmplx\_0\ X2) \Rightarrow (k24\_valued\_1\ X0\ (k3\_xcmplx\_0\ X1\ X2) = k24\_valued\_1\ (k24\_valued\_1\ X0\ X2)\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_xcmplx\_0\ X0\ (k4\_xcmplx\_0\ np\_\_1) = k4\_xcmplx\_0\ X0) \tag{2}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v3\_valued\_0\ X0) \wedge (v1\_finseq\_1\ X0)))) \Rightarrow (k6\_rvsum\_1\ X0 = k30\_valued\_1\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0) \wedge (v1\_xreal\_0\ X1)) \Rightarrow (k11\_binop\_2\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge(v1\_finseq\_1\ X0))))\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_rvsum\_1\ X0\ X1 = k24\_valued\_1\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v1\_valued\_0\ X0)\wedge(v1\_finseq\_1\ X0))))\Rightarrow((v1\_relat\_1\ (k30\_valued\_1\ X0))\wedge((v1\_funct\_1\ (k30\_valued\_1\ X0))\wedge((v1\_valued\_0\ (k30\_valued\_1\ X0))\wedge(v1\_finseq\_1\ (k30\_valued\_1\ X0))))) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\Rightarrow((v1\_relat\_1\ (k30\_valued\_1\ X0))\wedge((v1\_funct\_1\ (k30\_valued\_1\ X0))\wedge((v1\_valued\_0\ (k30\_valued\_1\ X0))\wedge(v3\_valued\_0\ (k30\_valued\_1\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v1\_valued\_0\ X0)\wedge(v1\_finseq\_1\ X0))))\wedge(v1\_xcmplx\_0\ X1))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k24\_valued\_1\ X0\ X1))\wedge(v1\_finseq\_1\ (k24\_valued\_1\ X0\ X1)))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v3\_valued\_0\ X0)))\wedge(v1\_xreal\_0\ X1))\Rightarrow((v1\_relat\_1\ (k24\_valued\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k24\_valued\_1\ X0\ X1))\wedge(v3\_valued\_0\ (k24\_valued\_1\ X0\ X1)))) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0))\wedge(v1\_xreal\_0\ (k4\_xcmplx\_0\ X0))) \tag{11}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(k30\_valued\_1\ X0 = k24\_valued\_1\ X0\ (k4\_xcmplx\_0\ np\_\_1)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k11\_binop\_2\ X0\ X1 = k11\_binop\_2\ X1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v1\_valued\_0\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{15}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{16}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(v3\_valued\_0\ X1))))\Rightarrow(k10\_rvsum\_1\ (k6\_rvsum\_1\ X1)\ X0 = k6\_rvsum\_1\ (k10\_rvsum\_1\ X1\ X0)))$$