

t36_valued_2

(TMWLjswUG4G9xeaARjcJXiyHA6yTEhqYwfl)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k14_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.k1_funct_1 (k24_valued_1 \\ X0 X1) X2 = k3_xcmplx_0 X1 (k1_funct_1 X0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k3_xcmplx_0 \\ (k5_xcmplx_0 X0) (k5_xcmplx_0 X1) = k5_xcmplx_0 (k3_xcmplx_0 X0 \\ X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 \\ X0 (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 np_1 X0 = k5_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 \\ X0))) \Rightarrow (v1_xcmplx_0 (k1_funct_1 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 \\ X0))) \wedge (v1_xcmplx_0 X1)) \Rightarrow (((v1_relat_1 (k14_valued_2 X0 X1)) \wedge \\ ((v1_funct_1 (k14_valued_2 X0 X1)) \wedge (v1_valued_0 (k14_valued_2 \\ X0 X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(v1_xcmplx_0 (k5_xcmplx_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\wedge(v1_xcmplx_0 X1))\Rightarrow((v1_relat_1 (k14_valued_2 X0 X1))\wedge(v1_funct_1 (k14_valued_2 X0 X1))) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\Rightarrow((X2 = k24_valued_1 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k9_xtuple_0 X0)\wedge(\forall X3.(X3 \in k9_xtuple_0 X2)\Rightarrow(k1_funct_1 X2 X3 = k3_xcmplx_0 X1 (k1_funct_1 X0 X3))))))) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(k14_valued_2 X0 X1 = k24_valued_1 X0 (k7_xcmplx_0 np_1 X1))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (12)$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(\forall X1.(v1_xcmplx_0 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_valued_0 X2)))\Rightarrow(k14_valued_2 (k14_valued_2 X2 X0) X1 = k14_valued_2 X2 (k3_xcmplx_0 X0 X1))))$$