

t15_valued_2 (TM- NdB7Xh3ZPt9bG9UYwWffuYS13JY6AV8ip)

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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 $k13_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_valued_0 X2))) \Rightarrow (k13_valued_1 \\ & (k7_valued_1 X2 X0) X1 = k7_valued_1 X2 (k6_xcmplx_0 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & k2_xcmplx_0 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1) = k4_xcmplx_0 (k2_xcmplx_0 \\ & X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & v1_xcmplx_0 (k2_xcmplx_0 X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k13_valued_1 X0 X1 = k7_valued_1 \\ & X0 (k4_xcmplx_0 X1))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2) \wedge (v1_valued_0 X2))) \Rightarrow (k13_valued_1 \\ & (k13_valued_1 X2 X0) X1 = k13_valued_1 X2 (k2_xcmplx_0 X0 X1)))) \end{aligned}$$