

t51_valued_2
(TMcS2HQctbpqsPT2kNpW4xaxkxGePshy5Ug)

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Let $v1_valued_2 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_valued_2 : \iota \Rightarrow \iota$ be given. Let $k1_valued_2 : \iota \Rightarrow \iota$ be given. Let $k37_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k36_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k30_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_valued_2 X1) \Rightarrow (\forall X2. (v1_xcmplx_0 \\ & X2) \Rightarrow (\forall X3. (v1_xcmplx_0 X3) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k31_valued_2 \\ & X0 (k2_valued_2 (k1_valued_2 X1)) (k31_valued_2 X0 X1 X4 X2) X3 = \\ & k31_valued_2 X0 X1 X4 (k2_xcmplx_0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xcmplx_0 X0) \Rightarrow (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (k6_xcmplx_0 X0 (k6_xcmplx_0 X1 X2) = k2_xcmplx_0 \\ & (k6_xcmplx_0 X0 X1) X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xcmplx_0 X0) \Rightarrow (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (\forall X3. (v1_xcmplx_0 X3) \Rightarrow ((k6_xcmplx_0 \\ & X0 X1 = k6_xcmplx_0 X2 X3) \Rightarrow (k6_xcmplx_0 X0 X2 = k6_xcmplx_0 X1 X3)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xcmplx_0 X0) \Rightarrow (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (k6_xcmplx_0 X0 X1 = k6_xcmplx_0 (k6_xcmplx_0 \\ & X0 X2) (k6_xcmplx_0 X1 X2)))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k6_xcmplx_0 (k6_xcmplx_0 X0 X0) X1 = k4_xcmplx_0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 X0 = k6_numbers) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (k4_xcmplx_0 (k6_xcmplx_0 X0 X1) = k6_xcmplx_0 X1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_valued_2 X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge (v1_xcmplx_0 X3))) \Rightarrow (k37_valued_2 X0 X1 X2 X3 = k36_valued_2 \\ & X1 X2 X3) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_valued_2 X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge (v1_xcmplx_0 X3))) \Rightarrow (k31_valued_2 X0 X1 X2 X3 = k30_valued_2 \\ & X1 X2 X3) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k6_xcmplx_0 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_valued_2 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ & v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (\forall X2.(v1_xcmplx_0 \\ & X2) \Rightarrow (k36_valued_2 X0 X1 X2 = k30_valued_2 X0 X1 (k4_xcmplx_0 X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_relat_1 X1)) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(v1_valued_2 X1) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow (\forall X3.(v1_xcmplx_0 X3) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k31_valued_2 X0 (k2_valued_2 (k1_valued_2 X1) (k37_valued_2 X0 X1 X4 X2) X3 = \\ & k37_valued_2 X0 X1 X4 (k6_xcmplx_0 X2 X3)))))) \end{aligned}$$