

t48_valued_2

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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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k36_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k30_valued_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_valued_2 X2) \wedge \\ & ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & X2)))) \Rightarrow (v1_valued_0 (k1_funct_1 X3 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_valued_2 X2) \wedge \\ & ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & X2)))) \Rightarrow ((v1_relat_1 (k1_funct_1 X3 X1)) \wedge (v1_funct_1 (k1_funct_1 \\ & X3 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (v1_xcmplx_0 (k4_xcmplx_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_valued_2 X0) \wedge ((v1_relat_1 \\ & X1) \wedge ((v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \wedge (v1_xcmplx_0 X2)) \Rightarrow \\ & ((v1_relat_1 (k36_valued_2 X0 X1 X2)) \wedge (v1_funct_1 (k36_valued_2 \\ & X0 X1 X2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (k13_valued_1 X0 X1 = k7_valued_1 \\ & X0 (k4_xcmplx_0 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_valued_2 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (\forall X2.(v1_xcmplx_0 \\ X2) \Rightarrow (k36_valued_2 X0 X1 X2 = k30_valued_2 X0 X1 (k4_xcmplx_0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_valued_2 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((\\ v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (\forall X2.(v1_xcmplx_0 \\ X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow ((X3 = k30_valued_2 \\ X0 X1 X2) \Leftrightarrow ((k9_xtuple_0 X3 = k9_xtuple_0 X1) \wedge (\forall X4.(X4 \in k9_xtuple_0 \\ X3) \Rightarrow (k1_funct_1 X3 X4 = k7_valued_1 (k1_funct_1 X1 X4) X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(v1_valued_2 X2) \Rightarrow (\forall X3. \\ (v1_xcmplx_0 X3) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\ X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2)))) \Rightarrow ((X1 \in k9_xtuple_0 (k36_valued_2 \\ X2 X4 X3)) \Rightarrow (k1_funct_1 (k36_valued_2 X2 X4 X3) X1 = k13_valued_1 \\ (k1_funct_1 X4 X1) X3)))) \end{aligned}$$