

t42_funct_8 (TMJWXrmqiGcxyGeddx- UvQ5KHqGxhKpQSWsz)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_funct_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k13_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v3_funct_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v2_funct_8 : \iota \Rightarrow o$ be given. Let $v1_funct_8 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((k9_xtuple_0 (k13_valued_1 X0 \\ & X1) = k9_xtuple_0 X0) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 \\ & (k13_valued_1 X0 X1) X2 = k6_xcmplx_0 (k1_funct_1 X0 X2) X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k15_valued_1 X0 X1 X2 X3 = k13_valued_1 \\ & X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$v3_membered k1_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k15_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k15_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (5)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered\ X0)\Rightarrow(\forall X1.(v1_membered\ X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0 \\ & X1))))\Rightarrow((v3_funct_8\ X2\ X0\ X1)\Leftrightarrow(\forall X3.(m1_subset_1\ X3\ k1_numbers)\Rightarrow \\ & (((X3\ \in\ k1_relset_1\ X0\ X2)\wedge(k1_real_1\ X3\ \in\ k1_relset_1\ X0\ X2))\Rightarrow(\\ & k1_funct_1\ X2\ (k1_real_1\ X3) = k1_funct_1\ X2\ X3)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_relat_1\ X0)\Rightarrow((v2_funct_8\ X0)\Leftrightarrow(v1_funct_8\ (k9_xtuple_0\ X0))) \quad (8)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v1_membered\ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_membered\ X0)\wedge(v1_membered\ X1))\Rightarrow(\\ & \forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow \\ & (((v1_funct_1\ X2)\wedge(v4_funct_8\ X2\ X0\ X1))\Rightarrow((v1_funct_1\ X2)\wedge(\\ & v2_funct_8\ X2)\wedge(v3_funct_8\ X2\ X0\ X1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_membered\ X0)\wedge(v1_membered\ X1))\Rightarrow(\\ & \forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow \\ & (((v1_funct_1\ X2)\wedge(v2_funct_8\ X2)\wedge(v3_funct_8\ X2\ X0\ X1))\Rightarrow(\\ & (v1_funct_1\ X2)\wedge(v4_funct_8\ X2\ X0\ X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & ((v4_funct_8 X1 k1_numbers k1_numbers) \Rightarrow (v4_funct_8 (k15_valued_1 \\ & k1_numbers k1_numbers X1 X0) k1_numbers k1_numbers))) \end{aligned}$$