

t72_cfunct_1 (TMVZcvdQSmZfCxzTYMqD- StxF4nvHJv2uTZS)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k2_numbers : \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $k4_rfunct_1 : \iota \Rightarrow \iota$ be given. Let $k54_valued_1 : \iota \Rightarrow \iota$ be given. Let $r2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k55_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. ((v1_relat_1 \\ & X2) \wedge ((v1_funct_1 X2) \wedge (v3_valued_0 X2))) \Rightarrow ((v1_comseq_2 (k5_relat_1 \\ & X2 X0)) \Rightarrow (v1_comseq_2 (k5_relat_1 (k24_valued_1 X2 X1) X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_valued_0 \\ & X1))) \Rightarrow ((k5_relat_1 (k30_valued_1 X1) X0 = k30_valued_1 (k5_relat_1 \\ & X1 X0)) \wedge ((k5_relat_1 (k4_rfunct_1 X1) X0 = k4_rfunct_1 (k5_relat_1 \\ & X1 X0)) \wedge (k5_relat_1 (k54_valued_1 X1) X0 = k54_valued_1 (k5_relat_1 \\ & X1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (\\ & \forall X2. (m1_subset_1 X2 k2_numbers) \Rightarrow (r2_reset_1 X0 k1_numbers \\ & (k55_valued_1 X0 k2_numbers (k25_valued_1 X0 k2_numbers X1 X2)) \\ & (k26_valued_1 X0 k1_numbers (k55_valued_1 X0 k2_numbers X1) (k17_complex1 \\ & X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_membered X1)\wedge((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))\Rightarrow(k55_valued_1 X0 X1 X2 = k54_valued_1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1)\wedge(((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge(v1_xreal_0 X3)))\Rightarrow(k26_valued_1 X0 X1 X2 X3 = k24_valued_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_membered X1)\wedge(((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\wedge(v1_xcmplx_0 X3)))\Rightarrow(k25_valued_1 X0 X1 X2 X3 = k24_valued_1 X2 X3) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k17_complex1 X0 = k16_complex1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_comseq_2 (k55_valued_1 X0 k2_numbers X1))\Leftrightarrow(v1_comseq_2 X1))) \quad (10)$$

Assume the following.

$$v3_membered k1_numbers \quad (11)$$

Assume the following.

$$v1_membered k2_numbers \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_membered\ X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\ & (k55_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k55_valued_1\ X0\ X1\ X2)\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0))\Rightarrow \\ & ((v1_relat_1\ (k54_valued_1\ X0))\wedge((v1_funct_1\ (k54_valued_1 \\ & X0))\wedge(v3_valued_0\ (k54_valued_1\ X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1\ X2)\wedge \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\ & (k2_partfun1\ X0\ X1\ X2\ X3))\wedge(m1_subset_1\ (k2_partfun1\ X0\ X1\ X2\ X3) \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xcmplx_0\ X3))\Rightarrow((v1_funct_1\ (k25_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k25_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k2_numbers)))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0)\Rightarrow(v1_xreal_0\ (k16_complex1\ X0)) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_valued_0\ X2)) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(v1_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v1_xcmplx_0\ X1)) \quad (21)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0\ X1)\Rightarrow(\forall X2.((v1_funct_1 \\ & X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X1\ k2_numbers))))\Rightarrow \\ & (\forall X3.(m1_subset_1\ X3\ k2_numbers)\Rightarrow((v1_comseq_2\ (k2_partfun1 \\ & X1\ k2_numbers\ X2\ X0))\Rightarrow(v1_comseq_2\ (k2_partfun1\ X1\ k2_numbers \\ & (k25_valued_1\ X1\ k2_numbers\ X2\ X3)\ X0)))))) \end{aligned}$$