

t34_comseq_1

(TMFeLXggojpRhtz9hMhUsrHEPEkMyv15bS6)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_numbers : \iota$ 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 $r2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k36_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k51_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k50_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35_valued_1 : \iota \Rightarrow \iota$ be given. Let $k18_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k2_numbers) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\
 & (r2_reset_1 k5_numbers k2_numbers (k19_valued_1 k5_numbers \\
 & k2_numbers k2_numbers (k36_valued_1 k5_numbers k2_numbers X0) \\
 & (k36_valued_1 k5_numbers k2_numbers X1)) (k36_valued_1 k5_numbers \\
 & k2_numbers (k19_valued_1 k5_numbers k2_numbers k2_numbers X0 \\
 & X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\
 & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
 & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_reset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3))
 \end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow(k51_valued_1 X0 X1 X2 X3 X4 = k50_valued_1 \\ & X3 X4) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_membered X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k36_valued_1 \\ & X0 X1 X2 = k35_valued_1 X2) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow(k19_valued_1 X0 X1 X2 X3 X4 = k18_valued_1 \\ & X3 X4) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_membered X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k36_valued_1 \\ & X0 X1 (k36_valued_1 X0 X1 X2) = X2) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge(v1_membered \\ & X1))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((v1_funct_1 (k35_valued_1 \\ & X2))\wedge(v1_partfun1 (k35_valued_1 X2) X0)) \end{aligned} \tag{8}$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \tag{9}$$

Assume the following.

$$v1_membered k2_numbers \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ & X1)\wedge((v1_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k51_valued_1 X0 X1 X2 \\ & X3 X4))\wedge(m1_subset_1 (k51_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_membered\ X1)\wedge((v1_funct_1 \\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\Rightarrow((v1_funct_1 \\ (k36_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k36_valued_1\ X0\ X1\ X2)\ (\\ k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k2_numbers)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0)))\Rightarrow \\ (\forall X1.((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0 \\ X1))))\Rightarrow(k50_valued_1\ X0\ X1 = k18_valued_1\ X0\ (k35_valued_1\ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v1_membered \\ X1)\wedge((v1_membered\ X2)\wedge(((v1_funct_1\ X3)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1))))))\wedge((v1_funct_1\ X4)\wedge(m1_subset_1\ X4\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X2))))))\Rightarrow(k19_valued_1\ X0\ X1\ X2\ X3\ X4 = k19_valued_1 \\ X0\ X1\ X2\ X4\ X3) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0 \\ X0)))\wedge((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_valued_0\ X1))))\Rightarrow \quad (15) \\ (k18_valued_1\ X0\ X1 = k18_valued_1\ X1\ X0) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k2_numbers))\Rightarrow((v1_relat_1 \\ X0)\wedge(v1_valued_0\ X0)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \end{aligned} \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k2_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers)))))) \Rightarrow \\ & (r2_relset_1 k5_numbers k2_numbers (k36_valued_1 k5_numbers \\ & k2_numbers (k51_valued_1 k5_numbers k2_numbers k2_numbers X0 \\ & X1)) (k51_valued_1 k5_numbers k2_numbers k2_numbers X1 X0))) \end{aligned}$$