

t40_seq_1

(TMJHXwD9VVDaHMFddgLhiZ3U5KM6wKJ5dr9M)

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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 $k1_numbers : \iota$ 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 $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k37_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k52_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ 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 $v1_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
 & (r2_funct_2 k5_numbers k1_numbers (k20_valued_1 k5_numbers k1_numbers \\
 & k1_numbers (k37_valued_1 k5_numbers k1_numbers X0) (k37_valued_1 \\
 & k5_numbers k1_numbers X1)) (k37_valued_1 k5_numbers k1_numbers \\
 & (k20_valued_1 k5_numbers k1_numbers k1_numbers X0 X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\
 & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\
 & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\
 & X3) \Rightarrow (r2_funct_2 X0 X1 X3 X2))
 \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow(k52_valued_1 X0 X1 X2 X3 X4 = k50_valued_1 \\ & X3 X4) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k37_valued_1 \\ & X0 X1 X2 = k35_valued_1 X2) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow(k20_valued_1 X0 X1 X2 X3 X4 = k18_valued_1 \\ & X3 X4) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k37_valued_1 \\ & X0 X1 (k37_valued_1 X0 X1 X2) = X2) \end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v1_xboole_0 \\ & X1)\wedge(v3_membered X1))\wedge(((\neg v1_xboole_0 X2)\wedge(v3_membered X2))\wedge \\ & (((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge((v1_funct_2 X4 X0 X2)\wedge \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 \\ & (k50_valued_1 X3 X4))\wedge(v1_partfun1 (k50_valued_1 X3 X4) X0)) \end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge(v3_membered \\ & X1))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 (k35_valued_1 \\ & X2))\wedge(v1_partfun1 (k35_valued_1 X2) X0)) \end{aligned} \tag{9}$$

Assume the following.

$$v3_membered k1_numbers \tag{10}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered \ X2)\wedge(((v1_funct_1 \ X3)\wedge(m1_subset_1 \ X3 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ X1))))\wedge((v1_funct_1 \ X4)\wedge(m1_subset_1 \ X4 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ X2))))))\Rightarrow((v1_funct_1 \ (k52_valued_1 \ X0 \ X1 \ X2 \\ & X3 \ X4))\wedge(m1_subset_1 \ (k52_valued_1 \ X0 \ X1 \ X2 \ X3 \ X4) \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ k1_numbers)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered \ X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))))\Rightarrow((v1_funct_1 \\ & (k37_valued_1 \ X0 \ X1 \ X2))\wedge(m1_subset_1 \ (k37_valued_1 \ X0 \ X1 \ X2) \ (\\ & k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ k1_numbers)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 \ X0)\wedge((v1_funct_1 \ X0)\wedge(v1_valued_0 \ X0)))\Rightarrow \\ & (\forall X1.((v1_relat_1 \ X1)\wedge((v1_funct_1 \ X1)\wedge(v1_valued_0 \\ & X1))))\Rightarrow(k50_valued_1 \ X0 \ X1 = k18_valued_1 \ X0 \ (k35_valued_1 \ X1)) \end{aligned} \quad (14)$$

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.

$$\forall X0.(v3_membered \ X0)\Rightarrow(v1_membered \ X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ X1)))\Rightarrow(v1_relat_1 \ X2) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ X0 \ X1)))\Rightarrow((v1_partfun1 \ X2 \ X0)\Rightarrow(v1_funct_2 \ X2 \ X0 \ X1)) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1_membered \ X1)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1)))\Rightarrow(v1_valued_0 \ X2)) \end{aligned} \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (r2_funct_2 k5_numbers k1_numbers (k37_valued_1 k5_numbers k1_numbers \\ & (k52_valued_1 k5_numbers k1_numbers k1_numbers X0 X1)) (k52_valued_1 \\ & k5_numbers k1_numbers k1_numbers X1 X0))) \end{aligned}$$