

t70_comseq_3

(TMEv63g66cakd711D4No49QseNRYotc1Kss)

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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 $k2_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k55_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $v1_series_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k54_valued_1 : \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\neg(\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow ((r1_xxreal_0 \\
& k6_numbers (k3_funct_2 k5_numbers k1_numbers X0 X2)) \wedge (k3_funct_2 \\
& k5_numbers k1_numbers X1 X2 = k2_power X2 (k3_funct_2 k5_numbers \\
& k1_numbers X0 X2)))))) \wedge ((\exists X2.(m2_subset_1 X2 k1_numbers \\
& k5_numbers) \wedge (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
& ((r1_xxreal_0 X2 X3) \Rightarrow (r1_xxreal_0 np_1 (k3_funct_2 k5_numbers \\
& k1_numbers X1 X3)))))) \wedge (v1_series_1 X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
& X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0))))))\wedge(v7_ordinal1 X2))\Rightarrow(k8_nat_1 X0 X1 X2 = k1_funct_1 X1 X2) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

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.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k2_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k2_numbers))))))\Rightarrow(\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow((k17_complex1 (k8_nat_1 k2_numbers X0 X1) = k8_nat_1 k1_numbers (k55_valued_1 k5_numbers k2_numbers X0) X1)\wedge(r1_xreal_0 k6_numbers (k8_nat_1 k1_numbers (k55_valued_1 k5_numbers k2_numbers X0) X1)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X1)\wedge(v1_membered X1))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((v1_funct_1 (k54_valued_1 X2))\wedge(v1_partfun1 (k54_valued_1 X2) X0)) \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (10)$$

Assume the following.

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

Assume the following.

$$v1_membered\ k2_numbers \quad (12)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_membered\ X1)\wedge((v1_funct_1 \\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\Rightarrow((v1_funct_1 \\ (k55_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k55_valued_1\ X0\ X1\ X2)\ (\\ k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v1_partfun1\ X2\ X0)\Rightarrow(v1_funct_2\ X2\ X0\ X1)) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k1_numbers)\wedge \\ (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))))\Rightarrow \\ (\forall X1.((v1_funct_1\ X1)\wedge((v1_funct_2\ X1\ k5_numbers\ k2_numbers)\wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k2_numbers))))))\Rightarrow \\ (\neg(\forall X2.(m2_subset_1\ X2\ k1_numbers\ k5_numbers)\Rightarrow(k8_nat_1 \\ k1_numbers\ X0\ X2 = k2_power\ X2\ (k8_nat_1\ k1_numbers\ (k55_valued_1 \\ k5_numbers\ k2_numbers\ X1)\ X2)))\wedge((\exists X2.(m2_subset_1\ X2 \\ k1_numbers\ k5_numbers)\wedge(\forall X3.(m2_subset_1\ X3\ k1_numbers \\ k5_numbers)\Rightarrow((r1_xxreal_0\ X2\ X3)\Rightarrow(r1_xxreal_0\ np_1\ (k8_nat_1 \\ k1_numbers\ X0\ X3))))))\wedge(v1_series_1\ (k55_valued_1\ k5_numbers \\ k2_numbers\ X1)))) \end{aligned}$$