

t5_tietze

(TMdeFy4y5Df9Y5JX4uT8vnCzVKLQNfHiqHt)

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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 $v1_series_1 : \iota \Rightarrow o$ 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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k3_series_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
 & (((v2_comseq_2 X0) \wedge ((v2_comseq_2 X1) \wedge (\forall X2.(m2_subset_1 \\
 & X2 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 (k1_seq_1 X0 X2) (k1_seq_1 \\
 & X1 X2)))) \Rightarrow (r1_xxreal_0 (k2_seq_2 X0) (k2_seq_2 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
 & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
 & ((\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 \\
 & (k3_funct_2 k5_numbers k1_numbers X0 X2) (k3_funct_2 k5_numbers \\
 & k1_numbers X1 X2))) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\
 & (r1_xxreal_0 (k3_funct_2 k5_numbers k1_numbers (k3_series_1 \\
 & X0) X2) (k3_funct_2 k5_numbers k1_numbers (k3_series_1 X1) X2))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (7)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))\Rightarrow((v1_funct_1 (k3_series_1 X0))\wedge((v1_funct_2 (k3_series_1 X0) k5_numbers k1_numbers)\wedge(m1_subset_1 (k3_series_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \quad (9)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))\Rightarrow(k4_series_1 X0 = k2_seq_2 (k3_series_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))\Rightarrow((v1_series_1 X0)\Leftrightarrow(v2_comseq_2 (k3_series_1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k1_numbers)) \Rightarrow ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (13)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (14)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & ((v1_series_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers k1_numbers)))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\ & (v1_funct_2 X1 k5_numbers k1_numbers) \wedge ((v1_series_1 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((\\ & \forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (r1_xreal_0 \\ & (k3_funct_2 k5_numbers k1_numbers X0 X2) (k3_funct_2 k5_numbers \\ & k1_numbers X1 X2))) \Rightarrow (r1_xreal_0 (k4_series_1 X0) (k4_series_1 \\ & X1)))) \end{aligned}$$