

t10_series_1
(TMK6eAEjZhjgrD9wks25N4gkqF9RjMG22Lc)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. 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 $v1_series_1 : \iota \Rightarrow o$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $k4_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_series_1 : \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers k1_numbers)))))) \Rightarrow (r2_funct_2 k5_numbers k1_numbers \\ & (k3_series_1 (k26_valued_1 k5_numbers k1_numbers X1 X0)) (k26_valued_1 \\ & k5_numbers k1_numbers (k3_series_1 X1) X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers k1_numbers)))))) \Rightarrow ((v2_comseq_2 X1) \Rightarrow (k2_seq_2 (k26_valued_1 \\ & k5_numbers k1_numbers X1 X0) = k4_real_1 X0 (k2_seq_2 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow(k26_valued_1\ X0\ X1\ X2\ X3 = k24_valued_1 \\ & X2\ X3) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\ & X1)\wedge(v3_membered\ X1))\wedge(((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\wedge(v1_xreal_0 \\ & X3)))\Rightarrow((v1_funct_1\ (k24_valued_1\ X2\ X3))\wedge(v1_partfun1\ (k24_valued_1 \\ & X2\ X3)\ X0)) \end{aligned} \tag{6}$$

Assume the following.

$$v3_membered\ k1_numbers \tag{7}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xreal_0\ X0)\wedge((v1_funct_1\ X1)\wedge((v1_funct_2 \\ & X1\ k5_numbers\ k1_numbers)\wedge((v2_comseq_2\ X1)\wedge(m1_subset_1\ X1 \\ & (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers)))))))\Rightarrow((v1_funct_1 \\ & (k24_valued_1\ X1\ X0))\wedge((v1_funct_2\ (k24_valued_1\ X1\ X0)\ k5_numbers \\ & k1_numbers)\wedge(v2_comseq_2\ (k24_valued_1\ X1\ X0)))) \end{aligned} \tag{8}$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge((v1_funct_2\ X0\ k5_numbers\ k1_numbers)\wedge \\ & (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ k1_numbers))))))\Rightarrow \\ & ((v1_funct_1\ (k3_series_1\ X0))\wedge((v1_funct_2\ (k3_series_1\ X0) \\ & k5_numbers\ k1_numbers)\wedge(m1_subset_1\ (k3_series_1\ X0)\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ k1_numbers)))))) \end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (k4_series_1 X0 = k2_seq_2 (k3_series_1 X0)) \end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((v1_series_1 X0) \Leftrightarrow (v2_comseq_2 (k3_series_1 X0))) \end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1)) \end{aligned} \tag{14}$$

Theorem 1

$$\begin{aligned} & \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k5_numbers k1_numbers)))))) \Rightarrow ((v1_series_1 X1) \Rightarrow ((v1_series_1 \\ & (k26_valued_1 k5_numbers k1_numbers X1 X0)) \wedge (k4_series_1 (k26_valued_1 \\ & k5_numbers k1_numbers X1 X0) = k4_real_1 X0 (k4_series_1 X1)))))) \end{aligned}$$