

t7_series_1 (TMZoodXWsmP- Bco6qjSNP1asFp9XxX4wosA4)

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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 $v1_series_1 : \iota \Rightarrow o$ be given. Let $k1_series_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_seq_2 : \iota \Rightarrow \iota$ be given. Let $k3_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v7_membered : \iota \Rightarrow o$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_series_1 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k3_series_1 : \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\
& (((v2_comseq_2 X0) \wedge (v2_comseq_2 X1)) \Rightarrow (k2_seq_2 (k3_valued_1 \\
& k5_numbers k1_numbers k1_numbers X0 X1) = k7_real_1 (k2_seq_2 X0) \\
& (k2_seq_2 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_membered X0) \wedge (v7_membered \\
& X0))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\
& X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers X0) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \Rightarrow \\
& (k1_valued_1 (k2_series_1 X1) (k2_series_1 X2) = k2_series_1 (\\
& k1_series_1 X0 X1 X2))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((v3_membered \\ & X1) \wedge ((v3_membered X2) \wedge (((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2)))))) \Rightarrow (k3_valued_1 X0 X1 X2 X3 X4 = k1_valued_1 \\ & X3 X4) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))) \Rightarrow \\ & (k3_series_1 X0 = k2_series_1 X0) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 X0) \wedge ((v1_membered \\ & X0) \wedge (v7_membered X0))) \wedge (((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\ & X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \wedge \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers X0) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \Rightarrow (k1_series_1 \\ & X0 X1 X2 = k1_valued_1 X1 X2) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((\neg v1_xboole_0 \\ & X1) \wedge (v3_membered X1)) \wedge (((\neg v1_xboole_0 X2) \wedge (v3_membered X2)) \wedge \\ & (((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \wedge ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X0 X2) \wedge \\ & (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X2)))))) \Rightarrow ((v1_funct_1 \\ & (k1_valued_1 X3 X4)) \wedge (v1_partfun1 (k1_valued_1 X3 X4) X0)) \end{aligned} \tag{6}$$

Assume the following.

$$v7_membered k1_numbers \tag{7}$$

Assume the following.

$$v3_membered k1_numbers \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers \\ & k1_numbers) \wedge ((v2_comseq_2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \wedge ((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge ((v2_comseq_2 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow (\\ & (v1_funct_1 (k1_valued_1 X0 X1)) \wedge ((v1_funct_2 (k1_valued_1 X0 \\ & X1) k5_numbers k1_numbers) \wedge (v2_comseq_2 (k1_valued_1 X0 X1)))) \end{aligned} \tag{9}$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \Rightarrow \\ & ((v1_funct_1 \ (k3_series_1 \ X0)) \wedge ((v1_funct_2 \ (k3_series_1 \ X0) \\ & k5_numbers \ k1_numbers) \wedge (m1_subset_1 \ (k3_series_1 \ X0) \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v1_xboole_0 \ X0) \wedge ((v1_membered \\ & X0) \wedge (v7_membered \ X0))) \wedge (((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \\ & X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ X0)))))) \wedge \\ & ((v1_funct_1 \ X2) \wedge ((v1_funct_2 \ X2 \ k5_numbers \ X0) \wedge (m1_subset_1 \\ & X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ X0)))))) \Rightarrow ((v1_funct_1 \\ & (k1_series_1 \ X0 \ X1 \ X2)) \wedge ((v1_funct_2 \ (k1_series_1 \ X0 \ X1 \ X2) \ k5_numbers \\ & X0) \wedge (m1_subset_1 \ (k1_series_1 \ X0 \ X1 \ X2) \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & k5_numbers \ X0)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \Rightarrow \\ & (k4_series_1 \ X0 = k2_seq_2 \ (k3_series_1 \ X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \Rightarrow \\ & ((v1_series_1 \ X0) \Leftrightarrow (v2_comseq_2 \ (k3_series_1 \ X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v3_membered \ X0) \Rightarrow (v1_membered \ X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))))) \Rightarrow \\ & (((v1_series_1 \ X0) \wedge (v1_series_1 \ X1)) \Rightarrow ((v1_series_1 \ (k1_series_1 \\ & k1_numbers \ X0 \ X1)) \wedge (k4_series_1 \ (k1_series_1 \ k1_numbers \ X0 \ X1) = \\ & k7_real_1 \ (k4_series_1 \ X0) \ (k4_series_1 \ X1)))))) \end{aligned}$$