

t11_holder_1 (TMTJKnck-
YkKg5Dus2mwzUEiY7sC1Xy9Z6Qf)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_series_1 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_power : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $v7_valued_0 : \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_seq_2 : \iota \Rightarrow o$ 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 $k2_series_1 : \iota \Rightarrow \iota$ 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 $v3_membered : \iota \Rightarrow o$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $v2_seq_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
 & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
 & ((v7_valued_0 X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\
 & (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow ((r1_xxreal_0 \\
 & X1 X2) \Rightarrow (r1_xxreal_0 (k8_nat_1 k1_numbers X0 X1) (k8_nat_1 k1_numbers \\
 & X0 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2.(m1_subset_1 \\
 & X2 k1_numbers) \Rightarrow (((r1_xxreal_0 k6_numbers X1) \wedge (r1_xxreal_0 X1 \\
 & X2)) \Rightarrow (r1_xxreal_0 (k4_power X1 X0) (k4_power X2 X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v1_seq_2 X0) \wedge (v7_valued_0 X0)) \Rightarrow (\forall X1.(m2_subset_1 \\ & X1 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 (k8_nat_1 k1_numbers \\ & X0 X1) (k2_seq_2 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 \\ & k6_numbers (k3_funct_2 k5_numbers k1_numbers X0 X1))) \Rightarrow (v7_valued_0 \\ & (k3_series_1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v2_comseq_2 X1) \wedge ((\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\ & (r1_xxreal_0 k6_numbers (k1_seq_1 X1 X3))) \wedge (\forall X3.(m2_subset_1 \\ & X3 k1_numbers k5_numbers) \Rightarrow (k1_seq_1 X2 X3 = k4_power (k1_seq_1 \\ & X1 X3) X0)))))) \Rightarrow ((v2_comseq_2 X2) \wedge (k2_seq_2 X2 = k4_power (k2_seq_2 \\ & X1) X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 k5_numbers X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))))) \wedge (v7_ordinal1 X2)) \Rightarrow (k8_nat_1 X0 X1 X2 = k1_funct_1 X1 X2) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (k3_series_1 X0 = k2_series_1 X0) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))\Rightarrow \\ & ((\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers)\Rightarrow(r1_xxreal_0 \\ & k6_numbers (k1_seq_1 X0 X1)))\Rightarrow(\forall X1.(m2_subset_1 X1 k1_numbers \\ & k5_numbers)\Rightarrow(r1_xxreal_0 k6_numbers (k1_seq_1 (k3_series_1 \\ & X0) X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (13)$$

Assume the following.

$$v3_membered k1_numbers \quad (14)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (15)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 k5_numbers k1_numbers)\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers))))))\Rightarrow \\ & ((v1_funct_1 (k3_series_1 X0))\wedge((v1_funct_2 (k3_series_1 X0) \\ & k5_numbers k1_numbers)\wedge(m1_subset_1 (k3_series_1 X0) (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers k1_numbers)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(m1_subset_1 (k1_seq_1 X0 X1) k1_numbers) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (k4_series_1 X0 = k2_seq_2 (k3_series_1 X0)) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & ((v1_series_1 X0) \Leftrightarrow (v2_comseq_2 (k3_series_1 X0))) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & k1_numbers))) \Rightarrow (((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers \\ & k1_numbers) \wedge (v2_comseq_2 X0))) \Rightarrow ((v1_funct_1 X0) \wedge ((v1_funct_2 \\ & X0 k5_numbers k1_numbers) \wedge (v1_comseq_2 X0)))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ & X0) \wedge (v1_comseq_2 X0)))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge \\ & ((v3_valued_0 X0) \wedge ((v1_seq_2 X0) \wedge (v2_seq_2 X0)))))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (24)$$

Assume the following.

$$\forall X0. \forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (25)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k1_numbers) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\ & (((v1_series_1 X1) \wedge ((\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\ & (r1_xxreal_0 k6_numbers (k1_seq_1 X1 X3))) \wedge (\forall X3.(m2_subset_1 \\ & X3 k1_numbers k5_numbers) \Rightarrow (k1_seq_1 X2 X3 = k4_power (k1_seq_1 \\ & (k3_series_1 X1) X3) X0)))) \Rightarrow ((v2_comseq_2 X2) \wedge ((k2_seq_2 X2 = \\ & k4_power (k4_series_1 X1) X0) \wedge ((v7_valued_0 X2) \wedge (\forall X3. \\ & (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (r1_xxreal_0 (k1_seq_1 \\ & X2 X3) (k4_power (k4_series_1 X1) X0)))))))))) \end{aligned}$$