

157_matrix_9 (TMcygmqRxc- sMXyJuGd3CcCiQkAYpPFYs4U3)

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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 $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_matrix_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_matrix_2 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_matrix_2 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$k1_finseq_2 \ np_3 = k11_finseq_1 \ np_1 \ np_2 \ np_3 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 \ X0) \Rightarrow (\forall X1.(m1_matrix_2 \ X1 \ (k12_matrix_2 \\ X0)) \Rightarrow ((k3_relat_1 \ (k1_finseq_2 \ X0) \ X1 = X1) \wedge (k3_relat_1 \ X1 \ (k1_finseq_2 \\ X0) = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 \ X0 \ X1) \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 \ np_3) \wedge (m2_subset_1 \ np_3 \ k1_numbers \ k5_numbers)) \wedge \\ ((m1_subset_1 \ np_3 \ k5_numbers) \wedge (m1_subset_1 \ np_3 \ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 \ X0) \wedge (v3_matrix_2 \ X0)) \Rightarrow (\forall X1. \\ & (m1_matrix_2 \ X1 \ X0) \Leftrightarrow (m1_subset_1 \ X1 \ X0)) \end{aligned} \quad (7)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 \ X0) \wedge \\ & ((m1_subset_1 \ X1 \ X0) \wedge ((m1_subset_1 \ X2 \ X0) \wedge (m1_subset_1 \ X3 \ X0)))) \Rightarrow \\ & (k3_finseq_4 \ X0 \ X1 \ X2 \ X3 = k11_finseq_1 \ X1 \ X2 \ X3) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v1_funct_1 \ X4) \wedge (m1_subset_1 \ X4 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X0 \ X1)))) \wedge ((v1_funct_1 \ X5) \wedge (m1_subset_1 \ X5 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & X2 \ X3)))) \Rightarrow (k1_partfun1 \ X0 \ X1 \ X2 \ X3 \ X4 \ X5 = k3_relat_1 \ X4 \ X5) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow ((\neg v1_xboole_0 \ (k12_matrix_2 \ X0)) \wedge \\ & (v3_matrix_2 \ (k12_matrix_2 \ X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge (\\ & (v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \\ & X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 \ X0) \wedge \\ & ((m1_subset_1 \ X1 \ X0) \wedge ((m1_subset_1 \ X2 \ X0) \wedge (m1_subset_1 \ X3 \ X0)))) \Rightarrow \\ & (m2_finseq_1 \ (k3_finseq_4 \ X0 \ X1 \ X2 \ X3) \ X0) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(X1 = k12_matrix_2\ X0) \Leftrightarrow \\ (\forall X2.(X2 \in X1) \Leftrightarrow ((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ (k2_finseq_1 \\ X0)\ (k2_finseq_1\ X0)) \wedge ((v3_funct_2\ X2\ (k2_finseq_1\ X0)\ (k2_finseq_1 \\ X0)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_finseq_1 \\ X0)\ (k2_finseq_1\ X0)))))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (16)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k2_finseq_1\ np_3) \\ (k2_finseq_1\ np_3)) \wedge ((v3_funct_2\ X0\ (k2_finseq_1\ np_3)\ (k2_finseq_1 \\ np_3)) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_finseq_1 \\ np_3)\ (k2_finseq_1\ np_3)))))) \Rightarrow (k1_partfun1\ k5_numbers\ k5_numbers \\ (k2_finseq_1\ np_3)\ (k2_finseq_1\ np_3)\ (k3_finseq_4\ k5_numbers \\ np_1\ np_2\ np_3)\ X0 = X0) \end{aligned}$$