

t9_matrix_2

(TMZzZTzHnNa4V6xfvsaNLhCwqZmyzEx7cCF)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2. ((v1_matrix_1 \\ & X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 \\ & X2) \wedge ((k1_matrix_1 X1 = k1_matrix_1 X2) \wedge (\forall X3. (v7_ordinal1 \\ & X3) \Rightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 \\ & X1) \Rightarrow (k3_matrix_1 X0 X1 X3 X4 = k3_matrix_1 X0 X2 X3 X4)))))) \Rightarrow (X1 = \\ & X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((v1_matrix_1 X1) \wedge \\ & (m1_finseq_1 X1 (k3_finseq_2 X0)))) \Rightarrow ((v1_matrix_1 (k4_matrix_1 \\ & X0 X1)) \wedge (m2_finseq_1 (k4_matrix_1 X0 X1) (k3_finseq_2 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2. ((v1_matrix_1 \\ & X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow ((X2 = k4_matrix_1 X0 X1) \Leftrightarrow \\ & ((k3_finseq_1 X2 = k1_matrix_1 X1) \wedge ((\forall X3. (v7_ordinal1 \\ & X3) \Rightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 \\ & X2) \Leftrightarrow (k4_tarski X4 X3 \in k2_matrix_1 X1)))) \wedge (\forall X3. (v7_ordinal1 \\ & X3) \Rightarrow (\forall X4. (v7_ordinal1 X4) \Rightarrow ((k4_tarski X4 X3 \in k2_matrix_1 \\ & X1) \Rightarrow (k3_matrix_1 X0 X2 X3 X4 = k3_matrix_1 X0 X1 X4 X3)))))))))) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2. ((v1_matrix_1 \\ X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow (((k4_matrix_1 X0 X1 = \\ k4_matrix_1 X0 X2) \wedge (k3_finseq_1 X1 = k3_finseq_1 X2)) \Rightarrow (X1 = X2)))) \end{aligned}$$