

l34_matrix11

(TMaSWgFU7XcBDVB54rW2MUcG8ZbZZ7UoNyr)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix11 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 \\ & X0))) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\ & X0))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge (k1_matrix_1 X1 = k1_matrix_1 \\ & X2)) \Rightarrow (k2_matrix_1 X1 = k2_matrix_1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 \\ & X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3. (m1_matrix_1 X3 X0 X1 X2) \Rightarrow \\ & ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v7_ordinal1 X0) \wedge ((v7_ordinal1 X1) \wedge ((v7_ordinal1 X2) \wedge ((\neg v1_xboole_0 \\ & X3) \wedge ((m1_matrix_1 X4 X3 X1 X2) \wedge (m1_finseq_1 X5 X3)))))) \Rightarrow (m1_matrix_1 \\ & (k3_matrix11 X0 X1 X2 X3 X4 X5) X3 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\
& \quad (v7_ordinal1\ X2) \Rightarrow (\forall X3.(\neg v1_xboole_0\ X3) \Rightarrow (\forall X4. \\
& \quad (m1_matrix_1\ X4\ X3\ X1\ X2) \Rightarrow (\forall X5.(m2_finseq_1\ X5\ X3) \Rightarrow (\forall X6. \\
& \quad (m1_matrix_1\ X6\ X3\ X1\ X2) \Rightarrow (((k3_finseq_1\ X5 = k1_matrix_1\ X4) \Rightarrow (\\
& \quad (X6 = k3_matrix11\ X0\ X1\ X2\ X3\ X4\ X5) \Leftrightarrow ((k3_finseq_1\ X6 = k3_finseq_1 \\
& \quad X4) \wedge ((k1_matrix_1\ X6 = k1_matrix_1\ X4) \wedge (\forall X7.(v7_ordinal1 \\
& \quad X7) \Rightarrow (\forall X8.(v7_ordinal1\ X8) \Rightarrow ((k4_tarski\ X7\ X8 \in k2_matrix_1 \\
& \quad X4) \Rightarrow (((X7 \neq X0) \Rightarrow (k3_matrix_1\ X3\ X6\ X7\ X8 = k3_matrix_1\ X3\ X4\ X7\ X8)) \wedge \\
& \quad ((X7 = X0) \Rightarrow (k3_matrix_1\ X3\ X6\ X0\ X8 = k1_funct_1\ X5\ X8))))))))) \wedge \\
& \quad ((k3_finseq_1\ X5 \neq k1_matrix_1\ X4) \Rightarrow ((X6 = k3_matrix11\ X0\ X1\ X2\ X3 \\
& \quad X4\ X5) \Leftrightarrow (X6 = X4)))))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\
& \quad (\neg v1_xboole_0\ X2) \Rightarrow (\forall X3.(v7_ordinal1\ X3) \Rightarrow (\forall X4. \\
& \quad (m1_matrix_1\ X4\ X2\ X1\ X0) \Rightarrow (\forall X5.(m2_finseq_1\ X5\ X2) \Rightarrow ((k2_matrix_1 \\
& \quad X4 = k2_matrix_1\ (k3_matrix11\ X3\ X1\ X0\ X2\ X4\ X5)) \wedge ((k3_finseq_1\ X4 = \\
& \quad k3_finseq_1\ (k3_matrix11\ X3\ X1\ X0\ X2\ X4\ X5)) \wedge (k1_matrix_1\ X4 = k1_matrix_1 \\
& \quad (k3_matrix11\ X3\ X1\ X0\ X2\ X4\ X5)))))))))
\end{aligned}$$