

t40_matrixj1
(TMPJ2e6ss5Kdwk39HY8btbV76GRzmmHhtuN)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_matrixj1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k13_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v1_matrixj1 X2 X0) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\ & (k3_finseq_2 X0)))) \Rightarrow (\forall X3.((v1_matrixj1 X3 X0) \wedge (m2_finseq_1 \\ & X3 (k3_finseq_2 (k3_finseq_2 X0)))) \Rightarrow (k13_matrixj1 X0 X1 (k3_matrixj1 \\ & X0 X2 X3) = k13_matrixj1 X0 X1 (k3_matrixj1 X0 X2 (k4_matrixj1 X0 (\\ & k13_matrixj1 X0 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ & X1))) \Rightarrow (\forall X2.(m2_finseq_1 (k7_finseq_1 X0 X1) X2) \Rightarrow ((m2_finseq_1 \\ & X0 X2) \wedge (m2_finseq_1 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v1_matrixj1 X2 X0) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\ & (k3_finseq_2 X0)))) \Rightarrow (\forall X3.((v1_matrixj1 X3 X0) \wedge (m2_finseq_1 \\ & X3 (k3_finseq_2 (k3_finseq_2 X0)))) \Rightarrow (k13_matrixj1 X0 X1 (k3_matrixj1 \\ & X0 X2 X3) = k13_matrixj1 X0 X1 (k3_matrixj1 X0 (k4_matrixj1 X0 (k13_matrixj1 \\ & X0 X1 X2) X3)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 \ k1_xboole_0 = X0) \wedge (k7_finseq_1 \ k1_xboole_0 X0 = X0)) \quad (5)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2.((v1_matrixj1 X2 X0) \wedge (m2_finseq_1 X2 (k3_finseq_2 (k3_finseq_2 X0)))) \Rightarrow ((X2 = k1_xboole_0) \Rightarrow (k13_matrixj1 X0 X1 X2 = k1_xboole_0)))) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((v1_matrixj1 \ k1_xboole_0 X0) \wedge (m2_finseq_1 \ k1_xboole_0 (k3_finseq_2 (k3_finseq_2 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_matrixj1 X1 X0) \wedge (m1_finseq_1 X1 (k3_finseq_2 (k3_finseq_2 X0)))) \wedge ((v1_matrixj1 X2 X0) \wedge (m1_finseq_1 X2 (k3_finseq_2 (k3_finseq_2 X0)))))) \Rightarrow (k3_matrixj1 X0 X1 X2 = k7_finseq_1 X1 X2)) \quad (9)$$

Assume the following.

$$\exists X0.v1_xboole_0 X0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (11)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2.((v1_matrixj1 X2 X0) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow (\forall X3.((v1_matrixj1 X3 X0) \wedge (m2_finseq_1 X3 (k3_finseq_2 (k3_finseq_2 X0)))) \Rightarrow ((X2 = k1_xboole_0) \Rightarrow ((k13_matrixj1 X0 X1 (k3_matrixj1 X0 X3 (k4_matrixj1 X0 X2)) = k13_matrixj1 X0 X1 X3) \wedge (k13_matrixj1 X0 X1 (k3_matrixj1 X0 (k4_matrixj1 X0 X2) X3) = k13_matrixj1 X0 X1 X3)))))) \quad (12)$$