

t40_matrix13

(TMFai7ekMZfqzhxpvaiENpaDZ9cCiGMwHbQ)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix11 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ 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.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_matrix_1 X3 X2 X0 X1) \Rightarrow ((k3_finseq_1 \\ & X3 = X0) \wedge (k2_matrix_1 X3 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & (k1_matrix_1 X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (\forall X3.(\neg v1_xboole_0 X3) \Rightarrow (\forall X4. \\ & (m1_matrix_1 X4 X3 X1 X2) \Rightarrow (\forall X5.(m2_finseq_1 X5 X3) \Rightarrow (\forall X6. \\ & (m1_matrix_1 X6 X3 X1 X2) \Rightarrow (((k3_finseq_1 X5 = k1_matrix_1 X4) \Rightarrow (\\ & (X6 = k3_matrix11 X0 X1 X2 X3 X4 X5) \Leftrightarrow ((k3_finseq_1 X6 = k3_finseq_1 \\ & X4) \wedge ((k1_matrix_1 X6 = k1_matrix_1 X4) \wedge (\forall X7.(v7_ordinal1 \\ & X7) \Rightarrow (\forall X8.(v7_ordinal1 X8) \Rightarrow ((k4_tarski X7 X8 \in k2_matrix_1 \\ & X4) \Rightarrow (((X7 \neq X0) \Rightarrow (k3_matrix_1 X3 X6 X7 X8 = k3_matrix_1 X3 X4 X7 X8)) \wedge \\ & ((X7 = X0) \Rightarrow (k3_matrix_1 X3 X6 X0 X8 = k1_funct_1 X5 X8)))))))))) \wedge \\ & ((k3_finseq_1 X5 \neq k1_matrix_1 X4) \Rightarrow ((X6 = k3_matrix11 X0 X1 X2 X3 \\ & X4 X5) \Leftrightarrow (X6 = X4))))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\\ & \quad \forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4. \\ & \quad (m1_matrix_1 X4 X0 X1 X2) \Rightarrow (\forall X5.(m2_finseq_1 X5 X0) \Rightarrow ((\neg X3 \in \\ & \quad k2_finseq_1 (k3_finseq_1 X4)) \Rightarrow (k3_matrix11 X3 X1 X2 X0 X4 X5 = X4)))))) \end{aligned}$$