t60_matrix13 (TMYS9zhPvjQ7QJYnoijakKcWUQYsntKEJw7)

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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 $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_setfam\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_matrix11 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k5\_matrix13 : \iota \Rightarrow \iota$ be given. Let $k14\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_finset\_1\ X0) \wedge ((v1\_setfam\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers)))) \Rightarrow (\exists X1.(v7\_ordinal1\ X1) \wedge (r1\_tarski\ X0\ (k2\_finseq\_1\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (\forall X4.(v7\_ordinal1\ X4) \Rightarrow (\forall X5.(m1\_matrix\_1\ X5\ X0\ X1\ X2) \Rightarrow (\forall X6.(m2\_finseq\_2\ X6\ k5\_numbers\ (k4\_finseq\_2\ X3\ k5\_numbers)) \Rightarrow (\forall X7.(m2\_finseq\_1\ X7\ X0) \Rightarrow (\forall X8.(v7\_ordinal1\ X8) \Rightarrow (\forall X9.(m2\_finseq\_2\ X9\ k5\_numbers\ (k4\_finseq\_2\ X4\ k5\_numbers)) \Rightarrow ((r1\_tarski\ (k2\_zfmisc\_1\ (k10\_xtuple\_0\ X9)\ (k10\_xtuple\_0\ X6))\ (k2\_matrix\_1\ X5)) \Rightarrow ((X8 \in k10\_xtuple\_0\ X9) \vee (k1\_matrix13\ X0\ X5\ X4\ X3\ X9\ X6 = k1\_matrix13\ X0\ (k3\_matrix11\ X8\ X1\ X2\ X0\ X5\ X7)\ X4\ X3\ X9\ X6)))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.((v1\_finset\_1\ X0)\wedge((v1\_setfam\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow(k5\_matrix13\ X0 = k14\_finseq\_1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((v7\_ordinal1\ X1)\wedge(v7\_ordinal1\ X2)))\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ X0\ X1\ X2)\Rightarrow((v1\_matrix\_1\ X3)\wedge(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ X0)))) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_finset\_1\ X0)\wedge((v1\_setfam\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow(m2\_finseq\_2\ (k5\_matrix13\ X0)\ k5\_numbers\ (k4\_finseq\_2\ (k5\_card\_1\ X0)\ k5\_numbers)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow(m1\_subset\_1\ (k5\_card\_1\ X0)\ k4\_ordinal1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((v7\_ordinal1\ X0)\wedge((v7\_ordinal1\ X1)\wedge((v7\_ordinal1\ X2)\wedge((\neg v1\_xboole\_0\ X3)\wedge((m1\_matrix\_1\ X4\ X3\ X1\ X2)\wedge(m1\_finseq\_1\ X5\ X3))))))\Rightarrow(m1\_matrix\_1\ (k3\_matrix11\ X0\ X1\ X2\ X3\ X4\ X5)\ X3\ X1\ X2) \tag{9}$$

Assume the following.

$$\forall X0.m2\_finseq\_1\ (k14\_finseq\_1\ X0)\ k5\_numbers \tag{10}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ X0)))\Rightarrow(\forall X2.((v1\_finset\_1\ X2)\wedge((v1\_setfam\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow(\forall X3.((v1\_finset\_1\ X3)\wedge((v1\_setfam\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow(k6\_matrix13\ X0\ X1\ X2\ X3 = k1\_matrix13\ X0\ X1\ (k5\_card\_1\ X2)\ (k5\_card\_1\ X3)\ (k5\_matrix13\ X2)\ (k5\_matrix13\ X3))))) \tag{11}$$

Assume the following.

$$\forall X0.(\exists X1.(v7\_ordinal1\ X1)\wedge(r1\_tarski\ X0\ (k2\_finseq\_1\ X1)))\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ k5\_numbers)\Rightarrow((X1 = k14\_finseq\_1\ X0)\Leftrightarrow((k10\_xtuple\_0\ X1 = X0)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(\neg(r1\_xxreal\_0\ np\_\_1\ X2)\wedge((\neg r1\_xxreal\_0\ X3\ X2)\wedge((r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1))\wedge((X4 = k1\_funct\_1\ X1\ X2)\wedge((X5 = k1\_funct\_1\ X1\ X3)\wedge(r1\_xxreal\_0\ X5\ X4))))))))))))) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{13}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(m1\_matrix\_1\ X3\ X0\ X1\ X2)\Rightarrow(\forall X4.((v1\_finset\_1\ X4)\wedge((v1\_setfam\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow(\forall X5.(m2\_finseq\_1\ X5\ X0)\Rightarrow(\forall X6.(v7\_ordinal1\ X6)\Rightarrow(\forall X7.((v1\_finset\_1\ X7)\wedge((v1\_setfam\_1\ X7)\wedge(m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ k5\_numbers))))\Rightarrow((r1\_tarski\ (k2\_zfmisc\_1\ X7\ X4)\ (k2\_matrix\_1\ X3))\Rightarrow((X6 \in X7)\vee(k6\_matrix13\ X0\ X3\ X7\ X4 = k6\_matrix13\ X0\ (k3\_matrix11\ X6\ X1\ X2\ X0\ X3\ X5)\ X7\ X4))))))))))$$