t66_matrixj1 (TMKDtodQUTYy-oVr1TijmoinaKRP4MGePcGm)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v33\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_matrixj1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_2 : \iota \Rightarrow \iota$ be given. Let $k10\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k9\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Let $k2\_matrixj1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (((k4\_finseq\_1\ X0 = k4\_finseq\_1\ X1) \wedge (\forall X2.(v7\_ordinal1\ X2) \Rightarrow ((X2 \in k4\_finseq\_1\ X0) \Rightarrow (k1\_funct\_1\ X0\ X2 = k1\_funct\_1\ X1\ X2)))) \Rightarrow (X0 = X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrixj1\ X1\ X0)\wedge (m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0)))))\Rightarrow(k11\_matrixj1\ X0\ X1 = k9\_matrixj1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrixj1\ X1\ X0)\wedge (m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0)))))\Rightarrow(k10\_matrixj1\ X0\ X1 = k8\_matrixj1\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{8}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrixj1\ X1\ X0)\wedge (m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0)))))\Rightarrow(m2\_finseq\_1\ (k9\_matrixj1\ X0\ X1)\ k5\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrixj1\ X1\ X0)\wedge (m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0)))))\Rightarrow(m2\_finseq\_1\ (k8\_matrixj1\ X0\ X1)\ k5\_numbers) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((v1\_matrixj1\ X1\ X0)\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0)))))\Rightarrow((v1\_matrix\_1\ (k2\_matrixj1\ X0\ X1\ X2))\wedge(m2\_finseq\_1\ (k2\_matrixj1\ X0\ X1\ X2)\ (k3\_finseq\_2\ X0))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\wedge(((v1\_matrixj1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\wedge((v1\_matrixj1\ X2\ (u1\_struct\_0\ X0))\wedge(m1\_finseq\_1\ X2\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))))\Rightarrow((v1\_matrixj1\ (k25\_matrixj1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ (k25\_matrixj1\ X0\ X1\ X2)\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))) \tag{15}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrixj1\ X1\ X0)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0))))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers)\Rightarrow((X2 = k9\_matrixj1\ X0\ X1)\Leftrightarrow((k4\_finseq\_1\ X2 = k4\_finseq\_1\ X1)\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_matrix\_1\ (k2\_matrixj1\ X0\ X1\ X3)))))))) \tag{16}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_matrixj1\ X1\ X0)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ X0))))\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers)\Rightarrow((X2 = k8\_matrixj1\ X0\ X1)\Leftrightarrow((k4\_finseq\_1\ X2 = k4\_finseq\_1\ X1)\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X2)\Rightarrow(k1\_funct\_1\ X2\ X3 = k3\_finseq\_1\ (k2\_matrixj1\ X0\ X1\ X3)))))))) \tag{17}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\Rightarrow(\forall X1.((v1\_matrix\_1\ X1)\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X2.((v1\_matrix\_1\ X2)\wedge(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\Rightarrow(\forall X3.((v1\_matrix\_1\ X3)\wedge(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ (u1\_struct\_0\ X0))))\Rightarrow((X3 = k3\_matrix\_3\ X0\ X1\ X2)\Leftrightarrow((k3\_finseq\_1\ X3 = k3\_finseq\_1\ X1)\wedge((k1\_matrix\_1\ X3 = k1\_matrix\_1\ X1)\wedge(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow((k4\_tarski\ X4\ X5 \in k2\_matrix\_1\ X1)\Rightarrow(k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X3\ X4\ X5 = k3\_rlvect\_1\ X0\ (k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X1\ X4\ X5)\ (k3\_matrix\_1\ (u1\_struct\_0\ X0)\ X2\ X4\ X5)))))))))))) \tag{18}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\Rightarrow(\forall X1.((v1\_matrixj1\ X1\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\Rightarrow(\forall X2.((v1\_matrixj1\ X2\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\Rightarrow(\forall X3.((v1\_matrixj1\ X3\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ X3\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\Rightarrow((X3 = k25\_matrixj1\ X0\ X1\ X2)\Leftrightarrow((k4\_finseq\_1\ X3 = k4\_finseq\_1\ X1)\wedge(\forall X4.(v7\_ordinal1\ X4)\Rightarrow((X4 \in k4\_finseq\_1\ X3)\Rightarrow(k2\_matrixj1\ (u1\_struct\_0\ X0)\ X3\ X4 = k3\_matrix\_3\ X0\ (k2\_matrixj1\ (u1\_struct\_0\ X0)\ X1\ X4)\ (k2\_matrixj1\ (u1\_struct\_0\ X0)\ X2\ X4))))))))) \tag{19}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\Rightarrow(\forall X1.((v1\_matrixj1\ X1\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ X1\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\Rightarrow(\forall X2.((v1\_matrixj1\ X2\ (u1\_struct\_0\ X0))\wedge(m2\_finseq\_1\ X2\ (k3\_finseq\_2\ (k3\_finseq\_2\ (u1\_struct\_0\ X0)))))\Rightarrow((k10\_matrixj1\ (u1\_struct\_0\ X0)\ (k25\_matrixj1\ X0\ X1\ X2) = k10\_matrixj1\ (u1\_struct\_0\ X0)\ X1)\wedge(k11\_matrixj1\ (u1\_struct\_0\ X0)\ (k25\_matrixj1\ X0\ X1\ X2) = k11\_matrixj1\ (u1\_struct\_0\ X0)\ X1))))$$