

t41\_matrixc1 (TMWuRrCrxUWz-  
ficPdn8GdW1r9Hn7YQ7gv5J)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $k2\_numbers : \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_complsp2 : \iota \Rightarrow \iota$  be given. Let  $k1\_matrixc1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k9\_matrix\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k13\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k15\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X2)) \wedge (v1\_xboole\_0 X2)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ ((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_finseq\_1 X2) \wedge (v1\_matrix\_1 \\ X2)))) \Rightarrow ((k4\_tarski X0 X1 \in k2\_matrix\_1 X2) \Leftrightarrow ((r1\_xxreal\_0 np\_1 \\ X0) \wedge ((r1\_xxreal\_0 X0 (k3\_finseq\_1 X2)) \wedge ((r1\_xxreal\_0 np\_1 X1) \wedge \\ (r1\_xxreal\_0 X1 (k1\_matrix\_1 X2)))))))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (v7\_ordinal1 X1) \Rightarrow ((X0 \in k2\_finseq\_1 X1) \Leftrightarrow ((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 X0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow(k9\_matrix\_5 X0 X1 = k1\_funct\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((v1\_matrix\_1 X1)\wedge(m1\_finseq\_1 X1 (k3\_finseq\_2 X0))\wedge(v7\_ordinal1 X2))))\Rightarrow(k8\_matrix\_1 X0 X1 X2 = k6\_matrix\_1 X0 X1 X2) \quad (7)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.k3\_finseq\_2 X0 = k13\_finseq\_1 X0 \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(k15\_complex1 (k15\_complex1 X0) = X0) \quad (10)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (11)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \quad (12)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (13)$$

Assume the following.

$$v1\_membered k2\_numbers \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow(m1\_subset\_1 (k9\_matrix\_5 X0 X1) k2\_numbers) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((v1\_matrix\_1 X1)\wedge(m1\_finseq\_1 X1 (k3\_finseq\_2 X0)))\wedge(v7\_ordinal1 X2)))\Rightarrow(m2\_finseq\_1 (k6\_matrix\_1 X0 X1 X2) X0) \quad (18)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (19)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (20)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(m1\_subset\_1 (k2\_finseq\_1 X0) (k1\_zfmisc\_1 k5\_numbers)) \quad (21)$$

Assume the following.

$$\forall X0.((v1\_matrix\_1 X0)\wedge(m1\_finseq\_1 X0 (k3\_finseq\_2 k2\_numbers)))\Rightarrow((v1\_matrix\_1 (k1\_matrixc1 X0))\wedge(m2\_finseq\_1 (k1\_matrixc1 X0) (k3\_finseq\_2 k2\_numbers))) \quad (22)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v1\_matrix\_1 X0))))\Rightarrow(m1\_subset\_1 (k1\_matrix\_1 X0) k5\_numbers) \quad (23)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 k2\_numbers)\Rightarrow(m2\_finseq\_1 (k1\_complsp2 X0) k2\_numbers) \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.((v1\_matrix\_1 X1)\wedge \\ (m2\_finseq\_1 X1 (k3\_finseq\_2 X0)))\Rightarrow(\forall X2.(v7\_ordinal1 \\ X2)\Rightarrow(\forall X3.(m2\_finseq\_1 X3 X0)\Rightarrow((X3 = k6\_matrix\_1 X0 X1 X2)\Leftrightarrow \\ ((k3\_finseq\_1 X3 = k1\_matrix\_1 X1)\wedge(\forall X4.(v7\_ordinal1 X4)\Rightarrow \\ ((X4 \in k2\_finseq\_1 (k1\_matrix\_1 X1))\Rightarrow(k1\_funct\_1 X3 X4 = k3\_matrix\_1 \\ X0 X1 X2 X4)))))))) \quad (25) \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 k2\_numbers))) \Rightarrow \\
& (\forall X1.((v1\_matrix\_1 X1) \wedge (m2\_finseq\_1 X1 (k3\_finseq\_2 k2\_numbers))) \Rightarrow \\
& ((X1 = k1\_matrixc1 X0) \Leftrightarrow ((k3\_finseq\_1 X1 = k3\_finseq\_1 X0) \wedge ((k1\_matrix\_1 \\
& \quad X1 = k1\_matrix\_1 X0) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3. \\
& \quad (v7\_ordinal1 X3) \Rightarrow ((k4\_tarski X2 X3 \in k2\_matrix\_1 X0) \Rightarrow (k3\_matrix\_1 \\
& \quad k2\_numbers X1 X2 X3 = k15\_complex1 (k3\_matrix\_1 k2\_numbers X0 X2 \\
& \quad X3))))))))))
\end{aligned} \tag{26}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\
& X1 k2\_numbers) \Rightarrow ((X1 = k1\_complsp2 X0) \Leftrightarrow ((k3\_finseq\_1 X1 = k3\_finseq\_1 \\
& \quad X0) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (((r1\_xxreal\_0 np\_1 X2) \wedge ( \\
& \quad r1\_xxreal\_0 X2 (k3\_finseq\_1 X0))) \Rightarrow (k9\_matrix\_5 X1 X2 = k15\_complex1 \\
& \quad (k9\_matrix\_5 X0 X2))))))
\end{aligned} \tag{27}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \tag{28}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& \quad (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2)
\end{aligned} \tag{29}$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \tag{30}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered X1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_valued\_0 X2)) \tag{31}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_matrix\_1 X1) \wedge ( \\
& \quad m2\_finseq\_1 X1 (k3\_finseq\_2 k2\_numbers))) \Rightarrow ((X0 \in k2\_finseq\_1 \\
& \quad (k3\_finseq\_1 X1)) \Rightarrow (k8\_matrix\_1 k2\_numbers X1 X0 = k1\_complsp2 \\
& \quad (k8\_matrix\_1 k2\_numbers (k1\_matrixc1 X1) X0))))
\end{aligned}$$