

t30\_matrlin  
(TMGiyfQKn4qzAyAaSfJjf3HWxoqNigRw7dz)

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  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  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  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v9\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v10\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_matrlin : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_fvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k4\_fvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow (m2\_finseq\_2 X1 X0 (k4\_finseq\_2 (k3\_finseq\_1 X1) X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge (l2\_algstr\_0 X1)))))) \Rightarrow (\forall X2. (m2\_finseq\_2 X2 (u1\_struct\_0 X1) (k4\_finseq\_2 X0 (u1\_struct\_0 X1))) \Rightarrow (\forall X3. (m2\_finseq\_2 X3 (u1\_struct\_0 X1) (k4\_finseq\_2 X0 (u1\_struct\_0 X1))) \Rightarrow (k4\_rlvect\_1 X1 (k4\_fvsum\_1 X0 X1 X2 X3) = k3\_rlvect\_1 X1 (k4\_rlvect\_1 X1 X2) (k4\_rlvect\_1 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1 X0 k5\_numbers)\wedge(((\neg v2\_struct\_0 X1)\wedge(l2\_algstr\_0 X1))\wedge((m1\_subset\_1 X2 (k4\_finseq\_2 X0 (u1\_struct\_0 X1)))\wedge(m1\_subset\_1 X3 (k4\_finseq\_2 X0 (u1\_struct\_0 X1))))))\Rightarrow(k4\_fvsum\_1 X0 X1 X2 X3 = k3\_fvsum\_1 X1 X2 X3) \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0)\Rightarrow((l2\_algstr\_0 X0)\wedge(l5\_algstr\_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0)\Rightarrow(l1\_struct\_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0)\Rightarrow(\forall X1.(l1\_vectsp\_1 X1 X0)\Rightarrow(l2\_algstr\_0 X1)) \quad (12)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1 \ X0) \Rightarrow (m1\_finseq\_2 \ (k4\_finseq\_2 \ X0 \ X1) \ X1) \quad (14)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow (m2\_subset\_1 \ (k3\_finseq\_1 \ X0) \ k1\_numbers \ k5\_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0)) \Rightarrow (v1\_xboole\_0 \ X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow (v1\_relat\_1 \ X2) \quad (18)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 \ X0) \wedge ((\neg v6\_struct\_0 \ X0) \wedge ((v13\_algstr\_0 \ X0) \wedge ((v33\_algstr\_0 \ X0) \wedge ((v3\_group\_1 \ X0) \wedge ((v5\_group\_1 \ X0) \wedge (v4\_vectsp\_1 \ X0) \wedge ((v5\_vectsp\_1 \ X0) \wedge ((v2\_rlvect\_1 \ X0) \wedge ((v3\_rlvect\_1 \ X0) \wedge ((v4\_rlvect\_1 \ X0) \wedge (l6\_algstr\_0 \ X0)))))))))) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 \ X1) \wedge ((v13\_algstr\_0 \ X1) \wedge ((v8\_vectsp\_1 \ X1 \ X0) \wedge (v9\_vectsp\_1 \ X1 \ X0) \wedge ((v10\_vectsp\_1 \ X1 \ X0) \wedge ((v11\_vectsp\_1 \ X1 \ X0) \wedge ((v2\_rlvect\_1 \ X1) \wedge ((v3\_rlvect\_1 \ X1) \wedge ((v4\_rlvect\_1 \ X1) \wedge ((v1\_matrlin \ X1 \ X0) \wedge (l1\_vectsp\_1 \ X1 \ X0)))))))))) \Rightarrow (\forall X2. \\ & (m2\_finseq\_1 \ X2 \ (u1\_struct\_0 \ X1)) \Rightarrow (\forall X3.(m2\_finseq\_1 \ X3 \ (u1\_struct\_0 \ X1)) \Rightarrow ((k3\_finseq\_1 \ X2 = k3\_finseq\_1 \ X3) \Rightarrow (k4\_rlvect\_1 \ X1 \ (k3\_fvsum\_1 \ X1 \ X2 \ X3) = k3\_rlvect\_1 \ X1 \ (k4\_rlvect\_1 \ X1 \ X2) \ (k4\_rlvect\_1 \ X1 \ X3)))))) \end{aligned}$$