

## l26\_ec\_pf\_1

(TMYk9iRBYFFJiPggoWztV9oLmMEZ9cMM5H5)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_int\_3 : \iota \Rightarrow \iota$  be given. Let  $k2\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k8\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_group\_1 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  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  $k4\_ordinal1 : \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v1\_group\_1 X0) \wedge (l3\_algstr\_0 \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k2\_binop\_1 \\ & (u1\_struct\_0 X0) k5\_numbers (u1\_struct\_0 X0) (k4\_group\_1 X0) X1 \\ & np\_2 = k6\_algstr\_0 X0 X1 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 X0) \Rightarrow ((\neg r1\_xxreal\_0 X0 np\_1) \Rightarrow (((\neg v2\_struct\_0 \\ & (k9\_int\_3 X0)) \wedge ((\neg v6\_struct\_0 (k9\_int\_3 X0)) \wedge ((v13\_algstr\_0 \\ & (k9\_int\_3 X0)) \wedge ((v33\_algstr\_0 (k9\_int\_3 X0)) \wedge ((v3\_group\_1 ( \\ & k9\_int\_3 X0)) \wedge ((v5\_group\_1 (k9\_int\_3 X0)) \wedge ((v2\_rlvect\_1 (k9\_int\_3 \\ & X0)) \wedge ((v3\_rlvect\_1 (k9\_int\_3 X0)) \wedge ((v4\_rlvect\_1 (k9\_int\_3 X0)) \wedge \\ & ((v4\_vectsp\_1 (k9\_int\_3 X0)) \wedge ((v5\_vectsp\_1 (k9\_int\_3 X0)) \wedge ( \\ & l6\_algstr\_0 (k9\_int\_3 X0)))))))))) \Leftrightarrow ((v7\_ordinal1 X0) \wedge (v1\_int\_2 \\ & X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(v5\_group\_1 X0)\wedge(l3\_algstr\_0 X0))\wedge((m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X2 (u1\_struct\_0 X0))))\Rightarrow(k8\_group\_1 X0 X1 X2 = k6\_algstr\_0 X0 X1 X2) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0)\Rightarrow((l2\_algstr\_0 X0)\wedge(l5\_algstr\_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0)\Rightarrow((l4\_algstr\_0 X0)\wedge(l4\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0)\Rightarrow((l3\_struct\_0 X0)\wedge(l3\_algstr\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((v1\_int\_2 X0)\Leftrightarrow((\neg r1\_xxreal\_0 X0 np\_1)\wedge(\forall X1.(v7\_ordinal1 X1)\Rightarrow(\neg(r1\_int\_1 X1 X0)\wedge((X1\neq np\_1)\wedge(X1\neq X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0)\Rightarrow(((\neg v2\_struct\_0 X0)\wedge(v4\_vectsp\_1 X0))\Rightarrow((\neg v2\_struct\_0 X0)\wedge(v1\_group\_1 X0))) \quad (9)$$

**Theorem 1**

$$\forall X0.((v7\_ordinal1 X0)\wedge(v1\_int\_2 X0))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k9\_int\_3 X0)))\Rightarrow(k2\_binop\_1 (u1\_struct\_0 (k9\_int\_3 X0)) k5\_numbers (u1\_struct\_0 (k9\_int\_3 X0)) (k4\_group\_1 (k9\_int\_3 X0)) X1 np\_2 = k8\_group\_1 (k9\_int\_3 X0) X1 X1))$$