

t136\_group\_3  
(TMX6jpbq9jk1fZXNVNdJSsDpKXkpVsrUSta4)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_group\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v15\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_group\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k9\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_group\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k18\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k17\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_group\_2 X1 X0) \Rightarrow ((v1\_finset\_1 \\ (k15\_group\_2 X0 X1) \Rightarrow ((\exists X2.(v1\_finset\_1 X2) \wedge ((X2 = k15\_group\_2 \\ X0 X1) \wedge (k18\_group\_2 X0 X1 = k5\_card\_1 X2))) \wedge (\exists X2.(v1\_finset\_1 \\ X2) \wedge ((X2 = k16\_group\_2 X0 X1) \wedge (k18\_group\_2 X0 X1 = k5\_card\_1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_group\_1 X0) \wedge ((v3\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)))) \Rightarrow (\forall X1.((v15\_algstr\_0 X1) \wedge (m1\_group\_2 \\ X1 X0)) \Rightarrow (k1\_card\_1 (k9\_group\_3 X0 X1) = k17\_group\_2 X0 (k11\_group\_3 \\ X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1\_finset\_1 X0) \Rightarrow ((\neg v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow ((v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (v2\_group\_1 X0) \wedge \\ & ((v3\_group\_1 X0) \wedge (l3\_algstr\_0 X0)))) \wedge (m1\_group\_2 X1 X0) \Rightarrow (( \\ & v15\_algstr\_0 (k11\_group\_3 X0 X1)) \wedge (m1\_group\_2 (k11\_group\_3 X0 \\ & X1) X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v2\_group\_1 X0) \wedge (v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)) \Rightarrow (\forall X1. (m1\_group\_2 X1 X0) \Rightarrow (k17\_group\_2 \\ & X0 X1 = k1\_card\_1 (k15\_group\_2 X0 X1))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v2\_group\_1 X0) \wedge (v3\_group\_1 \\ & X0) \wedge (l3\_algstr\_0 X0)) \Rightarrow (\forall X1. ((v15\_algstr\_0 X1) \wedge (m1\_group\_2 \\ & X1 X0) \Rightarrow (\neg((v1\_finset\_1 (k9\_group\_3 X0 X1)) \vee (v1\_finset\_1 (k15\_group\_2 \\ & X0 (k11\_group\_3 X0 X1)))) \wedge (\forall X2. (v1\_finset\_1 X2) \Rightarrow (\neg(X2 = \\ & k9\_group\_3 X0 X1) \wedge (k5\_card\_1 X2 = k18\_group\_2 X0 (k11\_group\_3 X0 \\ & X1)))))) \end{aligned}$$