

t155_group_2
(TMT2vPPUgSGBtTD3gd31qYaS2NoQ5k3KwdH)

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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 $k15_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_struct_0 : \iota \Rightarrow \iota$ be given. Let $v8_struct_0 : \iota \Rightarrow o$ be given. Let $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_group_2 : \iota \Rightarrow \iota$ be given. Let $k18_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_group_1 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k16_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v8_struct_0 X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Rightarrow (\forall X1.((v15_algstr_0 \\ X1) \wedge (m1_group_2 X1 X0)) \Rightarrow ((k18_group_2 X0 X1 = k7_group_1 X0) \Rightarrow (\\ r1_group_2 X0 X1 (k6_group_2 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow ((v1_finset_1 \\ (k15_group_2 X0 X1)) \Rightarrow ((\exists X2.(v1_finset_1 X2) \wedge ((X2 = k15_group_2 \\ X0 X1) \wedge (k18_group_2 X0 X1 = k5_card_1 X2))) \wedge (\exists X2.(v1_finset_1 \\ X2) \wedge ((X2 = k16_group_2 X0 X1) \wedge (k18_group_2 X0 X1 = k5_card_1 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (k7_group_1 X0 = k7_struct_0 X0) \tag{3}$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v8_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_finset_1 (u1_struct_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1_finset_1 X0) \Rightarrow ((\neg v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (k17_group_2 X0 X1 = k1_card_1 (k15_group_2 X0 X1))) \quad (9)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k7_struct_0 X0 = k1_card_1 (u1_struct_0 X0)) \quad (10)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v15_algstr_0 X1) \wedge (m1_group_2 X1 X0) \Rightarrow (((v1_finset_1 (k15_group_2 X0 X1)) \wedge (k17_group_2 X0 X1 = k7_struct_0 X0)) \Rightarrow ((v8_struct_0 X0) \wedge (r1_group_2 X0 X1 (k6_group_2 X0))))))$$