

t146_group_2
(TMRMjxoD7ry8DZ9fuYqpYknRrDucNF6Ndur)

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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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k15_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k16_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((r2_wellord2 X0 X1) \wedge (v1_finset_1 X0)) \Rightarrow (v1_finset_1 X1) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow ((k17_group_2 X0 X1 = k1_card_1 (k15_group_2 X0 X1)) \wedge (k17_group_2 X0 X1 = k1_card_1 (k16_group_2 X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow (r2_wellord2 (k15_group_2 X0 X1) (k16_group_2 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (m1_subset_1 (k18_group_2 X0 X1) k5_numbers) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow ((v1_finset_1 \\
& (k15_group_2 X0 X1) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow \\
& ((X2 = k18_group_2 X0 X1) \Leftrightarrow (\exists X3.(v1_finset_1 X3) \wedge ((X3 = k15_group_2 \\
& X0 X1) \wedge (X2 = k5_card_1 X3)))))))
\end{aligned} \tag{6}$$

Theorem 1

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