

t20_group_5 (TMHE- owT48Hh5JF9W9AuLAH3FjgqwjT8Byox)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_group_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_group_5 \\ & X0 X1 X2 = k6_algstr_0 X0 (k2_group_1 X0 (k6_algstr_0 X0 X2 X1)) (k6_algstr_0 \\ & X0 X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((l3_algstr_0 X0) \wedge ((m1_subset_1 \\ & X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\ & (k6_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow (m1_subset_1 (k2_group_1 X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k2_group_1 \\ & X0 X1) \Leftrightarrow ((k6_algstr_0 X0 X1 X2 = k1_group_1 X0) \wedge (k6_algstr_0 X0 X2 \\ & X1 = k1_group_1 X0)))))) \end{aligned} \tag{4}$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k2_group_5 X0 X1 X1 = k1_group_1 X0))$$