

t6_midsp_1
(TMZ7L91n85Ak8QKNyoPwynEVbyiQ5n2kVUx)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_midsp_1 : \iota \Rightarrow o$ be given. Let $l1_midsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_midsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_midsp_1 X0) \wedge (l1_midsp_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (k3_midsp_1 X0 (k3_midsp_1 X0 X1 X2) X3 = k3_midsp_1 \\ & X0 (k3_midsp_1 X0 X1 X3) (k3_midsp_1 X0 X2 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_midsp_1 \\ & X0) \wedge (l1_midsp_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k3_midsp_1 X0 X1 X2) (u1_struct_0 \\ & X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_midsp_1 \\ & X0) \wedge (l1_midsp_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (u1_struct_0 X0)))) \Rightarrow (k3_midsp_1 X0 X1 X2 = k3_midsp_1 X0 X2 X1) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_midsp_1 X0) \wedge (l1_midsp_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (k3_midsp_1 X0 X1 (k3_midsp_1 X0 X2 X3) = k3_midsp_1 \\ & X0 (k3_midsp_1 X0 X1 X2) (k3_midsp_1 X0 X1 X3)))))) \end{aligned}$$