

t1_convex4 (TMLM- bkJiM9dHs6eV5Y8KbcvruuBMZFHekjX)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_convex4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k5_complex1 : \iota$ be given. Let $k1_convex4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\forall X1. \\ & (m1_convex4 X1 X0) \Rightarrow (m2_funct_2 X1 (u1_struct_0 X0) k2_numbers \\ & (k9_funct_2 (u1_struct_0 X0) k2_numbers))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m2_funct_2 X1 (u1_struct_0 X0) k2_numbers (k9_funct_2 (u1_struct_0 \\ & X0) k2_numbers)) \Rightarrow (k1_convex4 X0 X1 = \text{ReplSep} (\text{toset} (\lambda X2 : \iota. \\ & m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \iota. k3_funct_2 (u1_struct_0 \\ & X0) k2_numbers X1 X2 \neq k5_complex1) (\lambda X2 : \iota. X2)))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l2_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_convex4 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow \\ & ((k3_funct_2 (u1_struct_0 X0) k2_numbers X1 X2 = k5_complex1) \Leftrightarrow \\ & (\neg X2 \in k1_convex4 X0 X1)))) \end{aligned}$$