

t25_prelamb
(TMaKueD8fpaVrohgm2XniqGSwTK9Cba1MWp)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_prelamb : \iota \Rightarrow o$ be given. Let $l2_prelamb : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_prelamb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_prelamb : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_prelamb X0) \wedge (l2_prelamb \\ & \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r2_prelamb X0 (k12_finseq_1 \\ & \quad (u1_struct_0 X0) (k2_prelamb X0 X1 (k1_prelamb X0 (k2_prelamb X0 \\ & \quad \quad X1 X2) X1)) (k2_prelamb X0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_prelamb X0) \wedge (l2_prelamb \\ & \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r2_prelamb X0 (k12_finseq_1 \\ & \quad (u1_struct_0 X0) X1) (k2_prelamb X0 X2 (k1_prelamb X0 X1 X2))) \wedge (\\ & \quad r2_prelamb X0 (k12_finseq_1 (u1_struct_0 X0) X1) (k1_prelamb X0 \\ & \quad \quad (k2_prelamb X0 X2 X1) X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. (l2_prelamb X0) \Rightarrow (l1_prelamb X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_prelamb \\ & \quad X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & \quad X0)))) \Rightarrow (m1_subset_1 (k2_prelamb X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_prelamb \\ & X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & X0)))) \Rightarrow (m1_subset_1 (k1_prelamb X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_prelamb X0) \wedge (l2_prelamb \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_prelamb X0 X1 X2) \Leftrightarrow ((r2_prelamb \\ & X0 (k12_finseq_1 (u1_struct_0 X0) X1) X2) \wedge (r2_prelamb X0 (k12_finseq_1 \\ & (u1_struct_0 X0) X2) X1)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_prelamb X0) \wedge (l2_prelamb \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (r3_prelamb X0 (k2_prelamb \\ & X0 X1 X2) (k2_prelamb X0 X1 (k1_prelamb X0 (k2_prelamb X0 X1 X2) X1)))))) \end{aligned}$$