

t3_collsp (TMarunSXuzB- SKmx18BX8wA7eYQCxSQMswiW)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_collsp : \iota \Rightarrow o$ be given. Let $v3_collsp : \iota \Rightarrow o$ be given. Let $l1_collsp : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_collsp : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v3_collsp X0) \Leftrightarrow \\
& (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((k4_domain_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X1 X2 X3 \in u1_collsp X0) \wedge ((\\
& k4_domain_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) \\
& X1 X2 X4 \in u1_collsp X0) \wedge (k4_domain_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) X1 X2 X5 \in u1_collsp X0)))) \Rightarrow ((X1 = X2) \vee (k4_domain_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X3 X4 X5 \in u1_collsp \\
& X0)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow (\forall X1. (\\
& m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\
& ((r1_collsp X0 X1 X2 X3) \Leftrightarrow (k4_domain_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) X1 X2 X3 \in u1_collsp X0))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & (l1_collsp X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((r1_collsp \\ X0 X1 X2 X3) \wedge ((r1_collsp X0 X1 X2 X4) \wedge (r1_collsp X0 X1 X2 X5))) \Rightarrow ((\\ & X1 = X2) \vee (r1_collsp X0 X3 X4 X5)))))))))) \end{aligned}$$