

t14_hessenbe

(TMWUT7vp4WNddGJL9EkfSwsMmuMHbVJFQY5)

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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 $v4_collsp : \iota \Rightarrow o$ be given. Let $v2_anproj_2 : \iota \Rightarrow o$ be given. Let $v3_anproj_2 : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v3_collsp X0) \Leftrightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\ & (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (((r1_collsp X0 X1 X2 X3) \wedge ((\\ & r1_collsp X0 X1 X2 X4) \wedge (r1_collsp X0 X1 X2 X5)))) \Rightarrow ((X1 = X2) \vee (r1_collsp \\ & X0 X3 X4 X5))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v2_collsp X0) \Leftrightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r1_collsp X0 X1 X2 X1) \wedge ((r1_collsp X0 X1 X1 X2) \wedge (r1_collsp \\ & X0 X1 X2 X2))))))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & ((v4_collsp X0) \wedge ((v2_anproj_2 X0) \wedge ((v3_anproj_2 X0) \wedge (l1_collsp \\ & X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0)) \Rightarrow (((r1_collsp X0 X3 X4 X5) \wedge ((r1_collsp X0 X3 \\ & X4 X6) \wedge ((r1_collsp X0 X1 X2 X5) \wedge (r1_collsp X0 X1 X2 X6)))) \Rightarrow ((X1 = \\ & X2) \vee ((X3 = X4) \vee ((r1_collsp X0 X1 X2 X3) \vee (X5 = X6))))))))) \end{aligned}$$