

t23_coh_sp
(TMUCDo7wRuEvgApzX8QUcCbQaDN6BDo3zV5P)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_coh_sp : \iota \Rightarrow \iota$ be given. Let $k6_coh_sp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_coh_sp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_coh_sp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow (\forall X2. \\ & (v1_relat_1 X2) \Rightarrow (k3_relat_1 (k3_relat_1 X0 X1) X2 = k3_relat_1 \\ & X0 (k3_relat_1 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k5_coh_sp X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k5_coh_sp X0)) \Rightarrow ((k6_coh_sp X0 X1 = k7_coh_sp X0 \\ & X2) \Rightarrow ((k2_xtuple_0 (k9_coh_sp X0 X2 X1) = k3_relat_1 (k2_xtuple_0 \\ & X2) (k2_xtuple_0 X1)) \wedge ((k6_coh_sp X0 (k9_coh_sp X0 X2 X1) = k6_coh_sp \\ & X0 X2) \wedge (k7_coh_sp X0 (k9_coh_sp X0 X2 X1) = k7_coh_sp X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k5_coh_sp X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k5_coh_sp X0)) \Rightarrow (((k2_xtuple_0 X1 = k2_xtuple_0 \\ & X2) \wedge ((k6_coh_sp X0 X1 = k6_coh_sp X0 X2) \wedge (k7_coh_sp X0 X1 = k7_coh_sp \\ & X0 X2))) \Rightarrow (X1 = X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k5_coh_sp X0)) \Rightarrow ((v1_relat_1 \\ & (k2_xtuple_0 X1)) \wedge (v1_funct_1 (k2_xtuple_0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k5_coh_sp \\ & X0)) \wedge (m1_subset_1 X2 (k5_coh_sp X0))) \Rightarrow (m1_subset_1 (k9_coh_sp \\ & X0 X1 X2) (k5_coh_sp X0)) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k5_coh_sp X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k5_coh_sp X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (\\ & k5_coh_sp X0)) \Rightarrow (((k6_coh_sp X0 X1 = k7_coh_sp X0 X2) \wedge (k6_coh_sp \\ & X0 X3 = k7_coh_sp X0 X1)) \Rightarrow (k9_coh_sp X0 (k9_coh_sp X0 X2 X1) X3 = k9_coh_sp \\ & X0 X2 (k9_coh_sp X0 X1 X3)))))) \end{aligned}$$