

t61_intpro_1
(TMQ3g71atAfk7qkvqgKrDG3HK8CGwA4bwte)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_intpro_1 : \iota$ be given. Let $k3_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_intpro_1 : \iota$ be given. Let $k5_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow (k3_intpro_1 \\ & (k3_intpro_1 X0 X1) (k3_intpro_1 (k5_intpro_1 X0 X2) (k5_intpro_1 \\ & X1 X2)) \in k8_intpro_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & (k3_intpro_1 X0 (k3_intpro_1 X1 X2) \in k8_intpro_1) \wedge (X1 \in k8_intpro_1)) \Rightarrow \\ & (k3_intpro_1 X0 X2 \in k8_intpro_1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & k3_intpro_1 X0 (k3_intpro_1 X1 X2) \in k8_intpro_1) \Rightarrow (k3_intpro_1 \\ & X1 (k3_intpro_1 X0 X2) \in k8_intpro_1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_intpro_1) \wedge (m1_subset_1 X1 k1_intpro_1)) \Rightarrow (m1_subset_1 (k5_intpro_1 X0 X1) k1_intpro_1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_intpro_1) \wedge (m1_subset_1 X1 k1_intpro_1)) \Rightarrow (m1_subset_1 (k3_intpro_1 X0 X1) k1_intpro_1) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & k3_intpro_1 X0 X1 \in k8_intpro_1) \Rightarrow (k3_intpro_1 (k5_intpro_1 X0 \\ & X2) (k5_intpro_1 X1 X2) \in k8_intpro_1)))) \end{aligned}$$