

t60_intpro_1
(TMcuARh8LzhSGfUunuchjgtdsBKRQX5Y4Pb)

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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 $k5_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_intpro_1 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k7_intpro_1 : \iota \Rightarrow \iota$ be given. Let $v8_intpro_1 : \iota \Rightarrow o$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $k4_intpro_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_intpro_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_intpro_1)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow \\ & (k3_intpro_1 X1 (k5_intpro_1 X2 X1) \in k7_intpro_1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow (k3_intpro_1 \\ & (k3_intpro_1 X0 X1) (k3_intpro_1 X0 (k5_intpro_1 X1 X2)) \in k8_intpro_1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & (k3_intpro_1 X0 (k3_intpro_1 X1 X2) \in k8_intpro_1) \wedge (X1 \in k8_intpro_1)) \Rightarrow \\ & (k3_intpro_1 X0 X2 \in k8_intpro_1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k1_intpro_1) \Rightarrow (\forall X2.(m1_subset_1 X2 k1_intpro_1) \Rightarrow ((\\ & (k3_intpro_1 X0 X1 \in k8_intpro_1) \wedge (k3_intpro_1 X1 X2 \in k8_intpro_1)) \Rightarrow \\ & (k3_intpro_1 X0 X2 \in k8_intpro_1)))) \end{aligned} \quad (5)$$

Assume the following.

$$v8_intpro_1 \ k8_intpro_1 \tag{6}$$

Assume the following.

$$m1_subset_1 \ k8_intpro_1 \ (k1_zfmisc_1 \ k1_intpro_1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_intpro_1)\wedge(m1_subset_1 \ X1 \ k1_intpro_1))\Rightarrow(m1_subset_1 \ (k5_intpro_1 \ X0 \ X1) \ k1_intpro_1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_intpro_1)\wedge(m1_subset_1 \ X1 \ k1_intpro_1))\Rightarrow(m1_subset_1 \ (k3_intpro_1 \ X0 \ X1) \ k1_intpro_1) \tag{9}$$

Assume the following.

$$\forall X0.m1_subset_1 \ (k1_subset_1 \ X0) \ (k1_zfmisc_1 \ X0) \tag{10}$$

Assume the following.

$$k8_intpro_1 = k7_intpro_1 \ (k1_subset_1 \ k1_intpro_1) \tag{11}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k1_intpro_1))\Rightarrow((v8_intpro_1 \ X0)\Leftrightarrow(\forall X1.(m1_subset_1 \ X1 \ k1_intpro_1)\Rightarrow(\forall X2.(m1_subset_1 \ X2 \ k1_intpro_1)\Rightarrow(\forall X3.(m1_subset_1 \ X3 \ k1_intpro_1)\Rightarrow((\\ k3_intpro_1 \ X1 \ (k3_intpro_1 \ X2 \ X1) \in X0)\wedge((k3_intpro_1 \ (k3_intpro_1 \ X1 \ (k3_intpro_1 \ X2 \ X3)) \ (k3_intpro_1 \ (k3_intpro_1 \ X1 \ X2) \ (k3_intpro_1 \ X1 \ X3)) \in X0)\wedge((k3_intpro_1 \ (k4_intpro_1 \ X1 \ X2) \ X1 \in X0)\wedge((k3_intpro_1 \ (k4_intpro_1 \ X1 \ X2) \ X2 \in X0)\wedge((k3_intpro_1 \ X1 \ (k3_intpro_1 \ X2 \ (k4_intpro_1 \ X1 \ X2)) \in X0)\wedge((k3_intpro_1 \ X1 \ (k5_intpro_1 \ X1 \ X2) \in X0)\wedge((k3_intpro_1 \ X2 \ (k5_intpro_1 \ X1 \ X2) \in X0)\wedge((k3_intpro_1 \ (k3_intpro_1 \ X1 \ X3) \ (k3_intpro_1 \ (k3_intpro_1 \ X2 \ X3) \ (k3_intpro_1 \ (k5_intpro_1 \ X1 \ X2) \ X3)) \in X0)\wedge((k3_intpro_1 \ k2_intpro_1 \ X1 \in X0)\wedge(((X1 \in X0)\wedge(k3_intpro_1 \ X1 \ X2 \in X0))\Rightarrow(X2 \in X0)))))))))))))) \end{aligned} \tag{12}$$

Theorem 1

$$\forall X0.(m1_subset_1 \ X0 \ k1_intpro_1)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ k1_intpro_1)\Rightarrow(\forall X2.(m1_subset_1 \ X2 \ k1_intpro_1)\Rightarrow(k3_intpro_1 \ (k3_intpro_1 \ X0 \ X1) \ (k3_intpro_1 \ (k5_intpro_1 \ X0 \ X2) \ (k5_intpro_1 \ X1 \ X2)) \in k8_intpro_1)))$$