

t38_intpro_1
(TMRJU1XQHgBgfo5RBrJbKDGes5WAftZorf1)

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

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_intpro_1) \Rightarrow (\forall X1. (m1_subset_1 X1 k1_intpro_1) \Rightarrow ((X0 \in k8_intpro_1) \Rightarrow (k3_intpro_1 X1 X0 \in k8_intpro_1))) \quad (3)$$

Assume the following.

$$v8_intpro_1 k8_intpro_1 \quad (4)$$

Assume the following.

$$\forall X0. \exists X1. m1_subset_1 X1 X0 \quad (5)$$

Assume the following.

$$m1_subset_1 k8_intpro_1 (k1_zfmisc_1 k1_intpro_1) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_intpro_1) \wedge (m1_subset_1 X1 k1_intpro_1)) \Rightarrow (m1_subset_1 (k4_intpro_1 X0 X1) k1_intpro_1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_intpro_1)\wedge(m1_subset_1 X1 k1_intpro_1))\Rightarrow(m1_subset_1 (k3_intpro_1 X0 X1) k1_intpro_1) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_intpro_1))\Rightarrow((v8_intpro_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 k1_intpro_1)\Rightarrow(\forall X2.(m1_subset_1 X2 k1_intpro_1)\Rightarrow(\forall X3.(m1_subset_1 X3 k1_intpro_1)\Rightarrow((\\ k3_intpro_1 X1 (k3_intpro_1 X2 X1) \in X0)\wedge((k3_intpro_1 (k3_intpro_1 X1 (k3_intpro_1 X2 X3)) (k3_intpro_1 (k3_intpro_1 X1 X2) (k3_intpro_1 X1 X3)) \in X0)\wedge((k3_intpro_1 (k4_intpro_1 X1 X2) X1 \in X0)\wedge((k3_intpro_1 (k4_intpro_1 X1 X2) X2 \in X0)\wedge((k3_intpro_1 X1 (k3_intpro_1 X2 (k4_intpro_1 X1 X2)) \in X0)\wedge((k3_intpro_1 X1 (k5_intpro_1 X1 X2) \in X0)\wedge((k3_intpro_1 X2 (k5_intpro_1 X1 X2) \in X0)\wedge((k3_intpro_1 (k3_intpro_1 X1 X3) (k3_intpro_1 (k3_intpro_1 X2 X3) (k3_intpro_1 (k5_intpro_1 X1 X2) X3)) \in X0)\wedge((k3_intpro_1 k2_intpro_1 X1 \in X0)\wedge(((X1 \in X0)\wedge(k3_intpro_1 X1 X2 \in X0))\Rightarrow(X2 \in X0)))))))))))))) \end{aligned} \quad (9)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_intpro_1)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_intpro_1)\Rightarrow(\forall X2.(m1_subset_1 X2 k1_intpro_1)\Rightarrow(k3_intpro_1 (k3_intpro_1 X0 X1) (k3_intpro_1 (k3_intpro_1 X0 X2) (k3_intpro_1 X0 (k4_intpro_1 X1 X2))) \in k8_intpro_1)))$$