t22_intpro_1 (TMGf4kJkGykCUaNY9LqLDi341QqGonTPLtb)

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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 $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_intpro\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_subset\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_intpro\_1)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k1\_intpro\_1) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ k1\_intpro\_1) \Rightarrow (k3\_intpro\_1\ (k3\_intpro\_1\ X1\ (k3\_intpro\_1\ X2\ X3))\ (k3\_intpro\_1\ (k3\_intpro\_1\ X1\ X2)\ (k3\_intpro\_1\ X1\ X3)) \in k7\_intpro\_1\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_intpro\_1)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k1\_intpro\_1) \Rightarrow (k3\_intpro\_1\ X1\ (k3\_intpro\_1\ X2\ X1) \in k7\_intpro\_1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_intpro\_1)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k1\_intpro\_1) \Rightarrow (((X1 \in k7\_intpro\_1\ X0) \wedge (k3\_intpro\_1\ X1\ X2 \in k7\_intpro\_1\ X0)) \Rightarrow (X2 \in k7\_intpro\_1\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_intpro\_1)) \Rightarrow (m1\_subset\_1\ (k7\_intpro\_1\ X0)\ (k1\_zfmisc\_1\ k1\_intpro\_1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_intpro\_1) \wedge (m1\_subset\_1\ X1\ k1\_intpro\_1)) \Rightarrow (m1\_subset\_1\ (k3\_intpro\_1\ X0\ X1)\ k1\_intpro\_1) \tag{6}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k1\_subset\_1\ X0)\ (k1\_zfmisc\_1\ X0) \tag{7}$$

Assume the following.

$$k8\_intpro\_1 = k7\_intpro\_1\ (k1\_subset\_1\ k1\_intpro\_1) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_intpro\_1) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_intpro\_1) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k1\_intpro\_1) \Rightarrow (k3\_intpro\_1\ (k3\_intpro\_1\ X0\ X1)\ (k3\_intpro\_1\ (k3\_intpro\_1\ X2\ X0)\ (k3\_intpro\_1\ X2\ X1)) \in k8\_intpro\_1)))$$