

t33_incspl_1
(TMQQYZYoM8ewqm7nwqFwFf6pcjK5MwQt4Sb)

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Let $v15_incsp_1 : \iota \Rightarrow o$ be given. Let $l2_incsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $v3_incsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.k1_enumset1\ X0\ X1\ X2 = k1_enumset1\ X2\ X1\ X0 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v15_incsp_1\ X0) \wedge (l2_incsp_1\ X0)) \Rightarrow (\forall X1.(\\ m1_subset_1\ X1\ (u1_incsp_1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (\\ u1_incsp_1\ X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (u1_incsp_1\ X0)) \Rightarrow \\ ((\neg v3_incsp_1\ (k8_domain_1\ (u1_incsp_1\ X0)\ X1\ X2\ X3)\ X0) \Rightarrow (k2_incsp_1 \\ X0\ X1\ X2\ X3 = k2_incsp_1\ X0\ X3\ X1\ X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v15_incsp_1\ X0) \wedge (l2_incsp_1\ X0)) \Rightarrow (\forall X1.(\\ m1_subset_1\ X1\ (u1_incsp_1\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (\\ u1_incsp_1\ X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (u1_incsp_1\ X0)) \Rightarrow \\ ((\neg v3_incsp_1\ (k8_domain_1\ (u1_incsp_1\ X0)\ X1\ X2\ X3)\ X0) \Rightarrow (k2_incsp_1 \\ X0\ X1\ X2\ X3 = k2_incsp_1\ X0\ X1\ X3\ X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0\ X0) \wedge \\ ((m1_subset_1\ X1\ X0) \wedge ((m1_subset_1\ X2\ X0) \wedge (m1_subset_1\ X3\ X0)))) \Rightarrow \\ (k8_domain_1\ X0\ X1\ X2\ X3 = k1_enumset1\ X1\ X2\ X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1_incsp_1\ X0) \Rightarrow (\neg v1_xboole_0\ (u1_incsp_1\ X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l2_incsp_1 X0) \Rightarrow (l1_incsp_1 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v15_incsp_1 X0) \wedge (l2_incsp_1 X0)) \Rightarrow (\forall X1.(\\ & \quad m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (\\ & \quad u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow \\ & ((\neg v3_incsp_1 (k8_domain_1 (u1_incsp_1 X0) X1 X2 X3) X0) \Rightarrow (k2_incsp_1 \\ & \quad X0 X1 X2 X3 = k2_incsp_1 X0 X3 X2 X1)))))) \end{aligned}$$