t19_heyting2 (TMbkbxPrMUC9DZ34UeR9pyLzfJfds9j9Kmm)

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Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_finsub\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_substlat : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_lattice2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_substlat : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_heyting2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_setwiseo : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k5\_finsub\_1\ X0)) \Rightarrow (k10\_setwiseo\ X0\ X0\ X1\ (k11\_setwiseo\ X0) = X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_finset\_1\ X1) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1))\ (k1\_substlat\ X0\ X1)) \Rightarrow (k2\_lattice2\ (k4\_partfun1\ X0\ X1)\ (k5\_substlat\ X0\ X1)\ X2\ (k8\_heyting2\ X0\ X1) = k10\_setwiseo\ (k4\_partfun1\ X0\ X1)\ (k4\_partfun1\ X0\ X1)\ X2\ (k11\_setwiseo\ (k4\_partfun1\ X0\ X1)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\neg v1\_xboole\_0\ (k1\_substlat\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\neg v1\_xboole\_0\ (k4\_partfun1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Rightarrow (m1\_subset\_1\ X2\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1\ (k1\_substlat\ X0\ X1)\ (k1\_zfmisc\_1\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{7}$$

Theorem 1

$$\forall X0.\forall X1.(v1\_finset\_1\ X1)\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ (k5\_finsub\_1\ (k4\_partfun1\ X0\ X1))\ (k1\_substlat\ X0\ X1))\Rightarrow(X2 = k2\_lattice2\ (k4\_partfun1\ X0\ X1)\ (k5\_substlat\ X0\ X1)\ X2\ (k8\_heyting2\ X0\ X1)))$$