t19_ens_1 (TMJfvt6quVDLFe4XmYorXZpsYW7GDs6ZNQr)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_ens\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_ens\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ens\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k2\_ens\_1\ X0)) \Rightarrow ((\neg(k4\_ens\_1\ X0\ X1 = k1\_xboole\_0) \wedge (k3\_ens\_1\ X0\ X1 \neq k1\_xboole\_0)) \wedge ((v1\_funct\_1\ (k2\_xtuple\_0\ X1)) \wedge ((v1\_funct\_2\ (k2\_xtuple\_0\ X1)\ (k3\_ens\_1\ X0\ X1)\ (k4\_ens\_1\ X0\ X1)) \wedge (m1\_subset\_1\ (k2\_xtuple\_0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_ens\_1\ X0\ X1)\ (k4\_ens\_1\ X0\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k2\_ens\_1\ X0)) \Rightarrow (X1 = k4\_tarski\ (k1\_domain\_1\ X0\ X0\ (k3\_ens\_1\ X0\ X1)\ (k4\_ens\_1\ X0\ X1))\ (k2\_xtuple\_0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k2\_ens\_1\ X0)) \Rightarrow ((X3 \in k7\_ens\_1\ X0\ X1\ X2) \Rightarrow (X3 = k4\_tarski\ (k1\_domain\_1\ X0\ X0\ X1\ X2)\ (k2\_xtuple\_0\ X3)))))) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge ((v1\_funct\_2\ X3\ X1\ X2)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X2)))))\Rightarrow(((X2 = k1\_xboole\_0)\Rightarrow(X1 = k1\_xboole\_0))\Rightarrow(k1\_domain\_1\ (k2\_zfmisc\_1\ X0\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X2))\ (k1\_domain\_1\ X0\ X0\ X1\ X2)\ X3 \in k7\_ens\_1\ X0\ X1\ X2)))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge ((\neg v1\_xboole\_0\ X1)\wedge((m1\_subset\_1\ X2\ X0)\wedge(m1\_subset\_1\ X3\ X1))))\Rightarrow (k1\_domain\_1\ X0\ X1\ X2\ X3 = k4\_tarski\ X2\ X3) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k1\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X0 \tag{7}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_zfmisc\_1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(\neg v1\_xboole\_0\ X1))\Rightarrow (\neg v1\_xboole\_0\ (k2\_zfmisc\_1\ X0\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge ((\neg v1\_xboole\_0\ X1)\wedge((m1\_subset\_1\ X2\ X0)\wedge(m1\_subset\_1\ X3\ X1))))\Rightarrow (m1\_subset\_1\ (k1\_domain\_1\ X0\ X1\ X2\ X3)\ (k2\_zfmisc\_1\ X0\ X1)) \tag{10}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k2\_ens\_1\ X0))\Rightarrow(k4\_ens\_1\ X0\ X1 = k2\_xtuple\_0\ (k1\_xtuple\_0\ X1))) \tag{11}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k2\_ens\_1\ X0))\Rightarrow(k3\_ens\_1\ X0\ X1 = k1\_xtuple\_0\ (k1\_xtuple\_0\ X1))) \tag{12}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k2\_ens\_1\ X0))\Rightarrow((X3 \in k7\_ens\_1\ X0\ X1\ X2)\Leftrightarrow((k3\_ens\_1\ X0\ X3 = X1)\wedge(k4\_ens\_1\ X0\ X3 = X2))))))$$