t23_ens_1 (TMUWaUFVdBR-fkoEEj9HGv2BHQm8CibzLevu)

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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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k11\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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 $g1\_cat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $k8\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_ens\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_cat\_1 : \iota \Rightarrow o$ be given. Let $l1\_cat\_1 : \iota \Rightarrow o$ be given. Let $u4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_graph\_1 : \iota \Rightarrow \iota$ be given. Let $u2\_graph\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_cat\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))))\wedge(((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))))\wedge((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)\ X1))))))\Rightarrow(\forall X5.\forall X6.\forall X7.\forall X8.\forall X9.(g1\_cat\_1\ X0\ X1\ X2\ X3\ X4 = g1\_cat\_1\ X5\ X6\ X7\ X8\ X9)\Rightarrow((X0 = X5)\wedge((X1 = X6)\wedge((X2 = X7)\wedge((X3 = X8)\wedge(X4 = X9))))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((v1\_funct\_1\ (k9\_ens\_1\ X0))\wedge((v1\_funct\_2\ (k9\_ens\_1\ X0)\ (k2\_ens\_1\ X0)\ X0)\wedge(m1\_subset\_1\ (k9\_ens\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_ens\_1\ X0)\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((v1\_funct\_1\ (k8\_ens\_1\ X0))\wedge((v1\_funct\_2\ (k8\_ens\_1\ X0)\ (k2\_ens\_1\ X0)\ X0)\wedge(m1\_subset\_1\ (k8\_ens\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_ens\_1\ X0)\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((v1\_funct\_1\ (k10\_ens\_1\ X0))\wedge(m1\_subset\_1\ (k10\_ens\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_ens\_1\ X0)\ (k2\_ens\_1\ X0))\ (k2\_ens\_1\ X0))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X1\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))))\wedge(((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X1\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0)))))\wedge((v1\_funct\_1\ X4)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)\ X1))))))\Rightarrow((v1\_cat\_1\ (g1\_cat\_1\ X0\ X1\ X2\ X3\ X4))\wedge(l1\_cat\_1\ (g1\_cat\_1\ X0\ X1\ X2\ X3\ X4))) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(k11\_ens\_1\ X0 = g1\_cat\_1\ X0\ (k2\_ens\_1\ X0)\ (k8\_ens\_1\ X0)\ (k9\_ens\_1\ X0)\ (k10\_ens\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_cat\_1\ X0)\Rightarrow((v1\_cat\_1\ X0)\Rightarrow(X0 = g1\_cat\_1\ (u1\_struct\_0\ X0)\ (u4\_struct\_0\ X0)\ (u1\_graph\_1\ X0)\ (u2\_graph\_1\ X0)\ (u1\_cat\_1\ X0))) \tag{7}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k11\_ens\_1\ X0)))\Rightarrow(m1\_subset\_1\ X1\ X0))$$