t57_cohsp_1 (TM-PaEwh9SeRpMffXLDwveVSRH8GM3ub5JSj)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_classes1 : \iota \Rightarrow o$ be given. Let $v1\_coh\_sp : \iota \Rightarrow o$ 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 $v10\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_cohsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_cohsp\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_tarski : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $v9\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $v8\_cohsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_cohsp\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1\_xboole\_0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge ((v1\_classes1\ X0) \wedge (v1\_coh\_sp\ X0))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_classes1\ X1) \wedge (v1\_coh\_sp\ X1))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge ((v10\_cohsp\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ X0\ X1) \wedge ((v10\_cohsp\_1\ X3) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow ((k11\_cohsp\_1\ X0\ X1\ X2 = k11\_cohsp\_1\ X0\ X1\ X3) \Rightarrow (r2\_funct\_2\ X0\ X1\ X2\ X3))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_classes1\ X0)\wedge(v1\_coh\_sp\ X0)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_classes1\ X1)\wedge(v1\_coh\_sp\ X1)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge((v7\_cohsp\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow(\forall X3.\forall X4.(k2\_tarski\ X3\ X4\in X0)\Rightarrow(\forall X5.((k4\_tarski\ X3\ X5\in k11\_cohsp\_1\ X0\ X1\ X2)\wedge(k4\_tarski\ X4\ X5\in k11\_cohsp\_1\ X0\ X1\ X2))\Rightarrow(X3=X4)))))\tag{3}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_classes1\ X0)\wedge(v1\_coh\_sp\ X0)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_classes1\ X1)\wedge(v1\_coh\_sp\ X1)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge((v6\_cohsp\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow(\forall X3.\forall X4.(k2\_tarski\ X3\ X4\in X0)\Rightarrow(\forall X5.\forall X6.((k4\_tarski\ X3\ X5\in k11\_cohsp\_1\ X0\ X1\ X2)\wedge(k4\_tarski\ X4\ X6\in k11\_cohsp\_1\ X0\ X1\ X2))\Rightarrow(k2\_tarski\ X5\ X6\in X1)))))\tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Leftrightarrow(X2=X3))\tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(k3\_funct\_2\ X0\ X1\ X2\ X3=k1\_funct\_1\ X2\ X3)\tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))))\Rightarrow(k11\_cohsp\_1\ X0\ X1\ X2=k10\_cohsp\_1\ X2)\tag{7}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_classes1\ X0)\wedge(v1\_coh\_sp\ X0)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_classes1\ X1)\wedge(v1\_coh\_sp\ X1)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_tarski\ X0)\ (k3\_tarski\ X1))))\Rightarrow(\neg(\forall X3.\forall X4.(k2\_tarski\ X3\ X4\in X0)\Rightarrow(\forall X5.\forall X6.((k4\_tarski\ X3\ X5\in X2)\wedge(k4\_tarski\ X4\ X6\in X2))\Rightarrow(k2\_tarski\ X5\ X6\in X1)))\wedge((\forall X3.\forall X4.(k2\_tarski\ X3\ X4\in X0)\Rightarrow(\forall X5.((k4\_tarski\ X3\ X5\in X2)\wedge(k4\_tarski\ X4\ X5\in X2))\Rightarrow(X3=X4)))\wedge(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge((v10\_cohsp\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow(\neg(X2=k11\_cohsp\_1\ X0\ X1\ X3)\wedge(\forall X4.(m1\_subset\_1\ X4\ X0)\Rightarrow(k3\_funct\_2\ X0\ X1\ X3\ X4=k7\_relat\_1\ X2\ X4)))))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))))\Rightarrow(m1\_subset\_1\ (k11\_cohsp\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_tarski\ X0)\ (k3\_tarski\ X1)))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1=k2\_tarski\ X1\ X0 \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v10\_cohsp\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v4\_cohsp\_1\ X0)\wedge(v9\_cohsp\_1\ X0)))) \tag{11}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v9\_cohsp\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v7\_cohsp\_1\ X0)\wedge(v8\_cohsp\_1\ X0)))) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v4\_cohsp\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v5\_cohsp\_1\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v5\_cohsp\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v6\_cohsp\_1\ X0))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{15}$$

Theorem 1

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_classes1\ X0)\wedge(v1\_coh\_sp\ X0)))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v1\_classes1\ X1)\wedge(v1\_coh\_sp\ X1)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge((v10\_cohsp\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow(k3\_funct\_2\ X0\ X1\ X2\ X3 = k7\_relat\_1\ (k11\_cohsp\_1\ X0\ X1\ X2)\ X3))))$$