t19_pencil_1 (TMUAa4cL6od91NwUZ2YpfGCzYcuiNNiDom1)

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Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_zfmisc\_1 : \iota \Rightarrow o$ be given. Let $v2\_pencil\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_pencil\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_pencil\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_pre\_topc : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(r1\_ordinal1\ np\_\_2\ (k1\_card\_1\ X0)) \Leftrightarrow (\neg v1\_zfmisc\_1\ X0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.(r1\_ordinal1\ np\_\_2\ (k1\_card\_1\ X0)) \Leftrightarrow (\exists X1.\exists X2.\ (X1 \in X0) \wedge ((X2 \in X0) \wedge (X1 \neq X2))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k9\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (m1\_subset\_1\ (k9\_subset\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v2\_pencil\_1\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(((X2 \in X1)\wedge(X3 \in X1))\Rightarrow(r1\_pencil\_1\ X0\ X2\ X3)))))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_pencil\_1\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_pre\_topc\ X0))\Rightarrow((r1\_ordinal1\ np\_\_2\ (k1\_card\_1\ (k9\_subset\_1\ (u1\_struct\_0\ X0)\ X2\ X1)))\Rightarrow(r1\_tarski\ X2\ X1))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_pencil\_1\ X0\ X1\ X2)\Leftrightarrow(\neg(X1 \neq X2)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_pre\_topc\ X0))\Rightarrow(\neg r1\_tarski\ (k2\_tarski\ X1\ X2)\ X3)))))) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_zfmisc\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_zfmisc\_1\ X1)) \tag{10}$$

Theorem 1

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_zfmisc\_1\ X1)\Rightarrow((v2\_pencil\_1\ X1\ X0)\wedge(v1\_pencil\_1\ X1\ X0))))$$