t85_transgeo (TMHbh24yJYhwULjDYcaN7PQcRWQw7WsSyH9)

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Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_diraf : \iota \Rightarrow o$ be given. Let $l1\_analoaf : \iota \Rightarrow o$ 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v8\_transgeo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_transgeo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_partfun1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r2\_transgeo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_relat\_2 : \iota \Rightarrow o$ be given. Let $v4\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_analoaf : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ X0) \wedge ((v3\_funct\_2\ X1\ X0\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X0) \wedge ((v3\_funct\_2\ X2\ X0\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ (k2\_zfmisc\_1\ X0\ X0)))) \Rightarrow (((r2\_transgeo\ X0\ X1\ X3) \wedge (r2\_transgeo\ X0\ X2\ X3)) \Rightarrow (r2\_transgeo\ X0\ (k1\_transgeo\ X0\ X1\ X2)\ X3))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ X0\ X0) \wedge ((v3\_funct\_2\ X1\ X0\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ (k2\_zfmisc\_1\ X0\ X0)))) \Rightarrow ((r2\_transgeo\ X0\ X1\ X2) \Rightarrow (r2\_transgeo\ X0\ (k2\_funct\_2\ X0\ X1)\ X2)))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow(r2\_transgeo\ X0\ (k6\_partfun1\ X0)\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.k6\_partfun1\ X0 = k4\_relat\_1\ X0 \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge((v3\_relat\_2\ (k4\_relat\_1\ X0))\wedge((v4\_relat\_2\ (k4\_relat\_1\ X0))\wedge(v8\_relat\_2\ (k4\_relat\_1\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0))\wedge((v4\_relat\_1\ (k4\_relat\_1\ X0)\ X0)\wedge((v1\_funct\_1\ (k4\_relat\_1\ X0))\wedge(v1\_partfun1\ (k4\_relat\_1\ X0)\ X0))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_analoaf\ X0)\Rightarrow(m1\_subset\_1\ (u1\_analoaf\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_analoaf\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_partfun1\ (k6\_partfun1\ X0)\ X0)\wedge(m1\_subset\_1\ (k6\_partfun1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.v1\_relat\_1\ (k4\_relat\_1\ X0) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ X0\ X0)\wedge((v3\_funct\_2\ X1\ X0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\Rightarrow((v1\_funct\_1\ (k2\_funct\_2\ X0\ X1))\wedge((v1\_funct\_2\ (k2\_funct\_2\ X0\ X1)\ X0\ X0)\wedge((v3\_funct\_2\ (k2\_funct\_2\ X0\ X1)\ X0\ X0)\wedge(m1\_subset\_1\ (k2\_funct\_2\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ X0\ X0)\wedge((v3\_funct\_2\ X1\ X0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X0)\wedge((v3\_funct\_2\ X2\ X0\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))))\Rightarrow((v1\_funct\_1\ (k1\_transgeo\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k1\_transgeo\ X0\ X1\ X2)\ X0\ X0)\wedge((v3\_funct\_2\ (k1\_transgeo\ X0\ X1\ X2)\ X0\ X0)\wedge(m1\_subset\_1\ (k1\_transgeo\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))))) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge((v3\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))))\Rightarrow((v8\_transgeo\ X1\ X0)\Leftrightarrow(r2\_transgeo\ (u1\_struct\_0\ X0)\ X1\ (u1\_analoaf\ X0)))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))\Rightarrow(((v1\_relat\_2\ X1)\wedge((v1\_funct\_1\ X1)\wedge((v1\_partfun1\ X1\ X0)\wedge(v1\_funct\_2\ X1\ X0\ X0))))\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ X0\ X0)\wedge(v3\_funct\_2\ X1\ X0\ X0)))) \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v3\_relat\_2\ X0)\wedge(v8\_relat\_2\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge(v1\_relat\_2\ X0)) \tag{16}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((\neg v7\_struct\_0\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v1\_partfun1\ X2\ X0)\Rightarrow(v1\_funct\_2\ X2\ X0\ X1)) \tag{18}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge((v3\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge((v3\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))))\Rightarrow(((v8\_transgeo\ X1\ X0)\wedge(v8\_transgeo\ X2\ X0))\Rightarrow((v8\_transgeo\ (k2\_funct\_2\ (u1\_struct\_0\ X0)\ X1)\ X0)\wedge((v8\_transgeo\ (k1\_transgeo\ (u1\_struct\_0\ X0)\ X2\ X1)\ X0)\wedge(v8\_transgeo\ (k6\_partfun1\ (u1\_struct\_0\ X0))\ X0))))))$$