

## t32\_transgeo

(TMaEW9bkKNJYHasFBgskWNxMz97HMDZYipa)

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Let  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_analoaf : \iota \Rightarrow o$  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  $v3\_transgeo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow \\ &(\forall X2. (m1\_subset\_1 X2 X0) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge \\ &((v1\_funct\_2 X3 X0 X0) \wedge ((v3\_funct\_2 X3 X0 X0) \wedge (m1\_subset\_1 X3 ( \\ &k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))))) \Rightarrow ((k3\_funct\_2 X0 X0 X3 X1 = \\ &X2) \Leftrightarrow (k3\_funct\_2 X0 X0 (k2\_funct\_2 X0 X3) X2 = X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&\neg v7\_struct\_0 X0) \wedge ((v2\_analoaf X0) \wedge (l1\_analoaf \\ &X0)) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ &(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ &(u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\ &((r2\_analoaf X0 X1 X2 X3 X4) \Rightarrow ((r2\_analoaf X0 X2 X1 X4 X3) \wedge ((r2\_analoaf \\ &X0 X3 X4 X1 X2) \wedge (r2\_analoaf X0 X4 X3 X2 X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0. (l1\_analoaf X0) \Rightarrow (l1\_struct\_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0)\wedge \\ & (((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))))))\wedge(m1\_subset\_1 X3 X0))\Rightarrow(m1\_subset\_1 ( \\ & k3\_funct\_2 X0 X1 X2 X3) X1) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 X0 X0)\wedge \\ & ((v3\_funct\_2 X1 X0 X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0))))))\Rightarrow((v1\_funct\_1 (k2\_funct\_2 X0 X1))\wedge((v1\_funct\_2 (k2\_funct\_2 \\ & X0 X1) X0 X0)\wedge((v3\_funct\_2 (k2\_funct\_2 X0 X1) X0 X0)\wedge(m1\_subset\_1 \\ & (k2\_funct\_2 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0)\wedge((v2\_analoaf X0)\wedge(l1\_analoaf \\ & X0)))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0))\wedge((v3\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0))))))\Rightarrow((v3\_transgeo X1 X0)\Leftrightarrow(\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.(m1\_subset\_1 X3 \\ & (u1\_struct\_0 X0))\Rightarrow(r2\_analoaf X0 X2 X3 (k3\_funct\_2 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0) X1 X3) (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0) X1 X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0)\Rightarrow((\neg v7\_struct\_0 X0)\Rightarrow(\neg v2\_struct\_0 X0)) \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0)\wedge((v2\_analoaf X0)\wedge(l1\_analoaf \\ & X0)))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0))\wedge((v3\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0))))))\Rightarrow((v3\_transgeo X1 X0)\Rightarrow(v3\_transgeo \\ & (k2\_funct\_2 (u1\_struct\_0 X0) X1) X0))) \end{aligned}$$