

t126\_jgraph\_4  
(TMVyb9cbhnVvitjMs5CGiAsGgPjN9UnbtCs)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_jgraph\_4 : \iota \Rightarrow \iota$  be given. Let  $k8\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (u1\_struct\_0 (k1\_pre\_topc X0 X1) = X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k1\_pre\_topc X0 X2)))) \Rightarrow \\ & (((X1 = X3) \wedge (r1\_tarski X1 X2)) \Rightarrow (k1\_pre\_topc X0 X1 = k1\_pre\_topc \\ & (k1\_pre\_topc X0 X2) X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarSKI X0 X1)\wedge(r1\_tarSKI X1 X2))\Rightarrow(r1\_tarSKI X0 X2) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow(\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow \\ & (\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 (u1\_struct\_0 (k1\_pre\_topc \\ & (k15\_euclid np\_2) X1)) (u1\_struct\_0 (k1\_pre\_topc (k15\_euclid \\ & np\_2) X2))))\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & (k1\_pre\_topc (k15\_euclid np\_2) X1)) (u1\_struct\_0 (k1\_pre\_topc \\ & (k15\_euclid np\_2) X2))))))\Rightarrow(((X3 = k2\_partfun1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) (u1\_struct\_0 (k15\_euclid np\_2)) (k9\_jgraph\_4 \\ & X0) X1)\wedge((X2 = k8\_struct\_0 (k15\_euclid np\_2))\wedge(X1 = ReplSep (toset \\ & (\lambda X4 : \iota.m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2)))) \\ & (\lambda X4 : \iota.(r1\_xxreal\_0 (k18\_euclid X4) k6\_numbers)\wedge(X4\neq k4\_struct\_0 \\ & (k15\_euclid np\_2)) (\lambda X4 : \iota.X4))))\Rightarrow((r1\_xxreal\_0 X0 (k1\_real\_1 \\ & np\_1))\vee((r1\_xxreal\_0 np\_1 X0)\vee(v5\_pre\_topc X3 (k1\_pre\_topc \\ & (k15\_euclid np\_2) X1) (k1\_pre\_topc (k15\_euclid np\_2) X2)))))) \quad (5) \end{aligned}$$

Assume the following.

$$((v2\_xxreal\_0 np\_2)\wedge(m2\_subset\_1 np\_2 k1\_numbers k5\_numbers))\wedge ((m1\_subset\_1 np\_2 k5\_numbers)\wedge(m1\_subset\_1 np\_2 k1\_numbers)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarSKI X0 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0)\Rightarrow((v2\_pre\_topc (k15\_euclid X0))\wedge \\ & ((v13\_algstr\_0 (k15\_euclid X0))\wedge((v2\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v3\_rlvect\_1 (k15\_euclid X0))\wedge((v4\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v5\_rlvect\_1 (k15\_euclid X0))\wedge((v6\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v7\_rlvect\_1 (k15\_euclid X0))\wedge((v8\_rlvect\_1 (k15\_euclid X0))\wedge \\ & (v5\_rltopsp1 (k15\_euclid X0)))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.(l1\_rltopsp1 X0)\Rightarrow((l1\_rlvect\_1 X0)\wedge(l1\_pre\_topc X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow((v5\_rltopsp1 (k15\_euclid X0))\wedge (l1\_rltopsp1 (k15\_euclid X0))) \quad (10)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (v7\_ordinal1\ X1)) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers))\Rightarrow(v6\_membered\ X0) \quad (12)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\Rightarrow(\forall X2. \\ & (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ (k15\_euclid \\ & np\_2)\ X1))))\Rightarrow(\forall X3.(((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ ( \\ & u1\_struct\_0\ (k1\_pre\_topc\ (k1\_pre\_topc\ (k15\_euclid\ np\_2)\ X1) \\ & X2))\ (u1\_struct\_0\ (k1\_pre\_topc\ (k15\_euclid\ np\_2)\ X1))))\wedge(m1\_subset\_1 \\ & X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ (k1\_pre\_topc \\ & (k15\_euclid\ np\_2)\ X1)\ X2))\ (u1\_struct\_0\ (k1\_pre\_topc\ (k15\_euclid \\ & np\_2)\ X1))))))\Rightarrow(((X3 = k2\_partfun1\ (u1\_struct\_0\ (k15\_euclid \\ & np\_2))\ (u1\_struct\_0\ (k15\_euclid\ np\_2))\ (k9\_jgraph\_4\ X0)\ X2)\wedge \\ & ((X1 = k8\_struct\_0\ (k15\_euclid\ np\_2))\wedge(X2 = ReplSep\ (toset\ (\lambda X4 : \\ & \iota.m1\_subset\_1\ X4\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))\ (\lambda X4 : \\ & \iota.(r1\_xxreal\_0\ (k18\_euclid\ X4)\ k6\_numbers)\wedge(X4\neq k4\_struct\_0 \\ & (k15\_euclid\ np\_2)))\ (\lambda X4 : \iota.X4))))\Rightarrow((r1\_xxreal\_0\ X0\ (k1\_real\_1 \\ & np\_1))\vee((r1\_xxreal\_0\ np\_1\ X0)\vee(v5\_pre\_topc\ X3\ (k1\_pre\_topc \\ & (k1\_pre\_topc\ (k15\_euclid\ np\_2)\ X1)\ X2)\ (k1\_pre\_topc\ (k15\_euclid \\ & np\_2)\ X1)))))) \end{aligned}$$