

t130\_jgraph\_4  
(TMJ9pwWVbn2bBb3NvsJCQyLiSe2c1W3De9o)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  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  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_jgraph\_4 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $k12\_euclid : \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_square\_1 : \iota \Rightarrow \iota$  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  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 X1 (k13\_complex1 \\
& (k17\_euclid X0) (k12\_euclid X0))) \Rightarrow ((r1\_xxreal\_0 k6\_numbers ( \\
& k18\_euclid X0)) \vee (k3\_funct\_2 (u1\_struct\_0 (k15\_euclid np\_2)) \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k9\_jgraph\_4 X1) X0 = k19\_euclid \\
& (k8\_real\_1 (k12\_euclid X0) (k13\_complex1 (k6\_xcmplx\_0 (k13\_complex1 \\
& (k17\_euclid X0) (k12\_euclid X0)) X1) (k9\_real\_1 np\_1 X1))) (k8\_real\_1 \\
& (k12\_euclid X0) (k1\_real\_1 (k7\_square\_1 (k9\_real\_1 np\_1) (k4\_square\_1 \\
& (k13\_complex1 (k6\_xcmplx\_0 (k13\_complex1 (k17\_euclid X0) (k12\_euclid \\
& X0)) X1) (k9\_real\_1 np\_1 X1)))))))))) \wedge ((r1\_xxreal\_0 k6\_numbers \\
& (k18\_euclid X0)) \Rightarrow (k3\_funct\_2 (u1\_struct\_0 (k15\_euclid np\_2)) \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k9\_jgraph\_4 X1) X0 = X0)))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 \ X0) \wedge \\ & (((v1\_funct\_1 \ X2) \wedge ((v1\_funct\_2 \ X2 \ X0 \ X1) \wedge (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 \ X0 \ X1)))))) \wedge (m1\_subset\_1 \ X3 \ X0)) \Rightarrow (k3\_funct\_2 \ X0 \\ & X1 \ X2 \ X3 = k1\_funct\_1 \ X2 \ X3) \end{aligned} \quad (4)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 \ X0) \Rightarrow ((\neg v2\_struct\_0 \ (k15\_euclid \ X0)) \wedge \\ & (v5\_rltopsp1 \ (k15\_euclid \ X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 \ X0) \wedge (l1\_struct\_0 \ X0)) \Rightarrow (\neg v1\_xboole\_0 \\ & (u1\_struct\_0 \ X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (l1\_rltopsp1 \ X0) \Rightarrow ((l1\_rlvect\_1 \ X0) \wedge (l1\_pre\_topc \ X0)) \quad (8)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc \ X0) \Rightarrow (l1\_struct\_0 \ X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1\_xreal\_0 \ X0) \Rightarrow ((v1\_funct\_1 \ (k9\_jgraph\_4 \ X0)) \wedge ( \\ & (v1\_funct\_2 \ (k9\_jgraph\_4 \ X0) \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)) \\ & (u1\_struct\_0 \ (k15\_euclid \ np\_2)))) \wedge (m1\_subset\_1 \ (k9\_jgraph\_4 \\ & X0) \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)) \\ & (u1\_struct\_0 \ (k15\_euclid \ np\_2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 \ X0) \Rightarrow ((v5\_rltopsp1 \ (k15\_euclid \ X0)) \wedge \\ & (l1\_rltopsp1 \ (k15\_euclid \ X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v6\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (13)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.\forall X2. \\ & ((X1 \in X2) \wedge (X2 = ReplSep (toset (\lambda X3 : \iota.m1\_subset\_1 X3 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))) (\lambda X3 : \iota.(r1\_xreal\_0 k6\_numbers ( \\ & k18\_euclid X3)) \wedge (X3 \neq k4\_struct\_0 (k15\_euclid np\_2))) (\lambda X3 : \\ & \iota.X3))) \Rightarrow ((r1\_xreal\_0 X0 (k1\_real\_1 np\_1)) \vee ((r1\_xreal\_0 \\ & np\_1 X0) \vee (k1\_funct\_1 (k9\_jgraph\_4 X0) X1 \in X2)))) \end{aligned}$$