

t33\_gobrd11  
(TMG6yAkJ4h6tryuRRCWZfgjevohyViiH4dZ)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  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  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_numbers : \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((v4\_pre\_topc \\ & X1 X0) \wedge (v4\_pre\_topc X2 X0)) \Rightarrow (v4\_pre\_topc (k9\_subset\_1 (u1\_struct\_0 \\ & X0) X1 X2) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((v1\_matrix\_1 \\ & X1) \wedge (m2\_finseq\_1 X1 (k3\_finseq\_2 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (v4\_pre\_topc (k1\_goboard5 X1 X0) (k15\_euclid np\_2))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((v1\_matrix\_1 \\ & X1) \wedge (m2\_finseq\_1 X1 (k3\_finseq\_2 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (v4\_pre\_topc (k2\_goboard5 X1 X0) (k15\_euclid np\_2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 \ X1 \ X0) \Leftrightarrow (m1\_finseq\_1 \ X1 \ X0) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (7)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_matrix\_1 \ X0) \wedge (m1\_finseq\_1 \ X0 \ (k3\_finseq\_2 \\ & (u1\_struct\_0 \ (k15\_euclid \ np\_2)))))) \wedge (v7\_ordinal1 \ X1) \Rightarrow (m1\_subset\_1 \\ & (k2\_goboard5 \ X0 \ X1) \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_matrix\_1 \ X0) \wedge (m1\_finseq\_1 \ X0 \ (k3\_finseq\_2 \\ & (u1\_struct\_0 \ (k15\_euclid \ np\_2)))))) \wedge (v7\_ordinal1 \ X1) \Rightarrow (m1\_subset\_1 \\ & (k1\_goboard5 \ X0 \ X1) \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow ((v5\_rltopsp1 \ (k15\_euclid \ X0)) \wedge (l1\_rltopsp1 \ (k15\_euclid \ X0))) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_matrix\_1 \ X0) \wedge (m2\_finseq\_1 \ X0 \ (k3\_finseq\_2 \ (u1\_struct\_0 \\ & (k15\_euclid \ np\_2)))))) \Rightarrow (\forall X1. (v7\_ordinal1 \ X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 \ X2) \Rightarrow (k3\_goboard5 \ X0 \ X1 \ X2 = k9\_subset\_1 \ (u1\_struct\_0 \\ & (k15\_euclid \ np\_2)) \ (k1\_goboard5 \ X0 \ X1) \ (k2\_goboard5 \ X0 \ X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (14)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ &X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_matrix\_1\ X2)\wedge(m2\_finseq\_1\ X2 \\ &(k3\_finseq\_2\ (u1\_struct\_0\ (k15\_euclid\ np\_2))))))\Rightarrow(v4\_pre\_topc \\ &(k3\_goboard5\ X2\ X0\ X1)\ (k15\_euclid\ np\_2)))) \end{aligned}$$