t3_goboard6 (TMHJZ2hP6pNJbzT8Mg6fuJvygAimfc3hsh2)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. 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 $k14\_euclid : \iota \Rightarrow \iota$ be given. Let $k9\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_pre\_topc : \iota \Rightarrow \iota$ be given. Let $v6\_metric\_1 : \iota \Rightarrow o$ be given. Let $v7\_metric\_1 : \iota \Rightarrow o$ be given. Let $v8\_metric\_1 : \iota \Rightarrow o$ be given. Let $v9\_metric\_1 : \iota \Rightarrow o$ be given. Let $l1\_metric\_1 : \iota \Rightarrow o$ be given. Let $k3\_pcomps\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ 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 $v1\_pre\_topc : \iota \Rightarrow o$ be given. Let $l1\_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v1\_metric\_1 : \iota \Rightarrow o$ be given. Let $g1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_rlvect\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_funcsdom : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0)) \Rightarrow (\forall X1.\ ((v3\_pre\_topc\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Leftrightarrow ((v3\_pre\_topc\ X1\ (g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (u1\_pre\_topc\ X0))) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (u1\_pre\_topc\ X0)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v6\_metric\_1\ X0) \wedge ((v7\_metric\_1\ X0) \wedge ((v8\_metric\_1\ X0) \wedge ((v9\_metric\_1\ X0) \wedge (l1\_metric\_1\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k3\_pcomps\_1\ X0)))) \Rightarrow (\forall X2.\ (v1\_xreal\_0\ X2) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((X1 = k9\_metric\_1\ X0\ X3\ X2) \Rightarrow (v3\_pre\_topc\ X1\ (k3\_pcomps\_1\ X0))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X2.\forall X3.(g1\_pre\_topc\ X0\ X1 = g1\_pre\_topc\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \tag{3}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v2\_pre\_topc\ (k15\_euclid\ X0))\wedge((v13\_algstr\_0\ (k15\_euclid\ X0))\wedge((v2\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v3\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v4\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v5\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v6\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v7\_rlvect\_1\ (k15\_euclid\ X0))\wedge((v8\_rlvect\_1\ (k15\_euclid\ X0))\wedge(v5\_rltopsp1\ (k15\_euclid\ X0))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0)\Rightarrow((v1\_pre\_topc\ (k3\_pcomps\_1\ X0))\wedge(v2\_pre\_topc\ (k3\_pcomps\_1\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(m1\_subset\_1\ (u1\_pre\_topc\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_rltopsp1\ X0)\Rightarrow((l1\_rlvect\_1\ X0)\wedge(l1\_pre\_topc\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0)\Rightarrow(l1\_pre\_topc\ (k3\_pcomps\_1\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v5\_rltopsp1\ (k15\_euclid\ X0))\wedge(l1\_rltopsp1\ (k15\_euclid\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v1\_metric\_1\ (k14\_euclid\ X0))\wedge((v6\_metric\_1\ (k14\_euclid\ X0))\wedge((v7\_metric\_1\ (k14\_euclid\ X0))\wedge((v8\_metric\_1\ (k14\_euclid\ X0))\wedge((v9\_metric\_1\ (k14\_euclid\ X0))\wedge(l1\_metric\_1\ (k14\_euclid\ X0))))))) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((v5\_rltopsp1\ X1)\wedge(l1\_rltopsp1\ X1))\Rightarrow((X1 = k15\_euclid\ X0)\Leftrightarrow((g1\_pre\_topc\ (u1\_struct\_0\ X1)\ (u1\_pre\_topc\ X1) = k3\_pcomps\_1\ (k14\_euclid\ X0))\wedge(g1\_rlvect\_1\ (u1\_struct\_0\ X1)\ (u2\_struct\_0\ X1)\ (u1\_algstr\_0\ X1)\ (u1\_rlvect\_1\ X1) = k10\_funcsdom\ (k2\_finseq\_1\ X0))))) \tag{11}$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow ((v1\_pre\_topc\ X0) \Rightarrow (X0 = g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (u1\_pre\_topc\ X0))) \tag{13}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0)))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k14\_euclid\ X0))) \Rightarrow ((X2 = k9\_metric\_1\ (k14\_euclid\ X0)\ X3\ X1) \Rightarrow (v3\_pre\_topc\ X2\ (k15\_euclid\ X0))))))$$