

# l5\_goboard6

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_pcomps\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.((v9\_metric\_1 X1) \wedge (l1\_metric\_1 \\
& \quad X1)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3. \\
& \quad (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_pcomps\_1 X1)))) \Rightarrow \\
& \quad ((X3 = k9\_metric\_1 X1 X2 X0) \Rightarrow (v3\_pre\_topc X3 (k3\_pcomps\_1 X1))))))
\end{aligned} \tag{1}$$

**Theorem 1**

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