

# t24\_normsp\_2

(TMHacdoXr9tKScrdyow8n7nBhEFd2gpR3Tf)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  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  $v3\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v4\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v2\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_normsp\_2 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_normsp\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\
& ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\
& X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\
& (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 \\
& X2 k1\_numbers) \Rightarrow ((v4\_pre\_topc (ReplSep (toset (\lambda X3 : \iota. m1\_subset\_1 \\
& X3 (u1\_struct\_0 X0))) (\lambda X3 : \iota. r1\_xxreal\_0 (k1\_normsp\_0 X0 \\
& (k5\_algstr\_0 X0 X1 X3)) X2) (\lambda X3 : \iota. X3)) (k3\_normsp\_2 X0)) \wedge \\
& (m1\_subset\_1 (ReplSep (toset (\lambda X3 : \iota. m1\_subset\_1 X3 (u1\_struct\_0 \\
& X0))) (\lambda X3 : \iota. r1\_xxreal\_0 (k1\_normsp\_0 X0 (k5\_algstr\_0 X0 \\
& X1 X3)) X2) (\lambda X3 : \iota. X3)) (k1\_zfmisc\_1 (u1\_struct\_0 (k3\_normsp\_2 \\
& X0)))))))
\end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 k1\_numbers) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & (k3\_normsp\_2 X0)))) \Rightarrow ((X3 = ReplSep (toset (\lambda X4 : \iota.m1\_subset\_1 \\ & X4 (u1\_struct\_0 X0))) (\lambda X4 : \iota.r1\_xxreal\_0 (k1\_normsp\_0 X0 \\ & (k5\_algstr\_0 X0 X1 X4)) X2) (\lambda X4 : \iota.X4)) \Rightarrow (v4\_pre\_topc X3 ( \\ & k3\_normsp\_2 X0)))))) \end{aligned}$$