

## Topology and Manifolds

**RS1◊1.** Check that  $\mathbb{S}^n$  and  $\mathbb{R}P^n = P(\mathbb{R}^{n+1})$  are  $n$ -dim smooth manifolds.

**RS1◊2.** Prove that  $\mathbb{R}^n$  is contractible for  $n > 1$ .