

**Munkres §36**

**Ex. 36.1.** Any locally euclidean space is locally compact (as open subspaces of euclidean space are locally compact [Cor 29.3]). A manifold is locally euclidean *and* Hausdorff, so it is locally compact Hausdorff, hence regular [Ex 32.3]. A manifold also has a countable basis, so it is normal [Thm 32.1] and metrizable [Thm 34.1].

## REFERENCES