

Exercises

E9.52 [OQJ] Prerequisites: [OKX], [OKZ]. Show that the intersection of two balls is an open set (according to the definition [ONX]). Hence the family of all balls meets the requirements (a) and (b) in exercise [OKX]; so (as shown in [OKZ]), the family of balls is a base for the topology that it generates (which is the topology associated with metric space).

Solution 1. [OQK]