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bounded set (in a topological vector space)

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**Definition** Suppose  $B$  is a subset of a topological vector space  $V$ . Then  $B$  is a  $\lambda$ -neighborhood of the zero vector in  $V$  if for every neighborhood  $U$  of the zero vector in  $V$ , there exists a scalar  $\lambda$  such that  $B \subset \lambda U$ .

## References

- [1] W. Rudin, *Functional Analysis*, McGraw-Hill Book Company, 1973.
- [2] F.A. Valentine, *Convex sets*, McGraw-Hill Book company, 1964.
- [3] R. Cristescu, *Topological vector spaces*, Noordhoff International Publishing, 1977.