



Math for the people, by the people.

locally closed

Canonical name	LocallyClosed
Date of creation	2013-03-22 17:36:12
Last modified on	2013-03-22 17:36:12
Owner	asteroid (17536)
Last modified by	asteroid (17536)
Numerical id	5
Author	asteroid (17536)
Entry type	Definition
Classification	msc 54D99

- A subset Y of a topological space X is said to be **locally closed** if it is the intersection of an open and a closed subset.

The following result provides some definitions:

- The following are equivalent:

1. Y is locally closed in X .
2. Each point in Y has an open neighborhood $U \subseteq X$ such that $U \cap Y$ is closed in U (with the subspace topology).
3. Y is open in its closure \overline{Y} (with the subspace topology).