Tietze extension theorem

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Let X be a topological space. Then the following are equivalent:

1. X is normal.
2. If A is a closed subset in X, and $f\colon A \to [-1,1]$ is a continuous function, then f has a continuous to all of X. (In other words, there is a continuous function $f^*\colon X \to [-1,1]$ such that f and f^* coincide on A.)

Remark: If X and A are as above, and $f\colon A \to (-1,1)$ is a continuous function, then f has a continuous to all of X.

The present result can be found in [**?**].

References

[1] A. Mukherjea, K. Pothoven, *Real and Functional analysis*, Plenum press, 1978.