Cantor-Bendixson theorem

Canonical name	CantorBendixsonTheorem
Date of creation	2013-03-22 15:01:40
Last modified on	2013-03-22 15:01:40
Owner	CWoo (3771)
Last modified by	CWoo (3771)
Numerical id	6
Author	CWoo (3771)
Entry type	Theorem
Classification	msc 03E15
Classification	msc 54H05
Synonym	CUP theorem

Any closed subset X of the reals can be written as a disjoint union

$$X = C \cup P,$$

where C is countable and P is a perfect set (hence this theorem is also known as the *CUP theorem*).