

Infinite matroid theory exercise sheet 7

1. Let C be a topological circuit and let D be a finite bond of a finitely separable graph G . Show that $|C \cap D| \neq 1$.
2. (a) Show that any topological circuit of a locally finite graph includes (the edge set of) some finite cycle or some ray.
(b)* Is the same true in all finitely separable graphs? Prove it or find a counterexample.
3. What are the topological circuits of the following graph? Prove that they all really are topological circuits.

