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19312-1027. *Looking for a new proof of the Four Color Theorem.* Preliminary report.

This is a report on a partial proof of the Four Color Theorem that offers some hope, if it can be completed, of being simpler than the existing proofs. The main ideas are (1) a reducibility conjecture, that a certain easily testable characteristic of a configuration implies that it is D-reducible; and (2) a relatively uniform counting argument that does the work of the usual discharging procedure. This is very much a work in progress, and comments will be welcome. (Received September 22, 2009)