How NOT to Solve the Four Color Problem: The Chromatic Polynomial

Can you color a map with four colors? It seems like a simple question, but it's not! Trying to solve this Four Color Problem led to lots of beautiful mathematics, including the chromatic polynomial of a graph. Although the chromatic polynomial didn't help solve the problem that inspired it, it is interesting in its own right. We'll explore some of the history and features of this important polynomial.