

TEMPLE UNIVERSITY

MATH CLUB

How Many Mathematicians Does it Take to Color a Map?

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ABSTRACT: When we color different countries or regions on a map, we typically do not want two regions that touch each other to be the same color. Given this constraint, what is the lowest number of colors that will be sufficient to color any conceivable map? When this question was first posed in the 1850's, the answer was thought - but not proven - to be four. It was not until 1976 that Kenneth Appel and Wolfgang Haken proved the four color theorem with the aid of a computer. There is, however, an elementary proof showing that no more than five colors are needed. This proof, given by Percy John Heawood in 1890, was a correction of Alfred Kempe's failed proof of the four color theorem in 1879. In this talk we will review a sketch of the proof of the five color theorem and look at some of the stumbling blocks that were encountered in efforts to either prove or disprove the four color theorem.

FRIDAY, NOVEMBER 18, 2011

PIZZA!! FROM 12:15

TALK: 1:00 – 1:50 PM

ROOM 617, WACHMAN HALL
DEPARTMENT OF MATHEMATICS