

Interactive Notebook: Fill out Four Color Theorem note page

a) cut out and glue to page

b) What is the difference between a proof and a conjecture?

c) Did we prove that there were only 4 colors needed to color any map?

-- No, it was only a conjecture

d) How long did it take to prove this conjecture? (124 years)

e) "The proof for the 4-color theorem was controversial since it required a special tool that had never been used before on a major proof. Can you guess what tool was used?" (a computer)

sed?" (a computer)

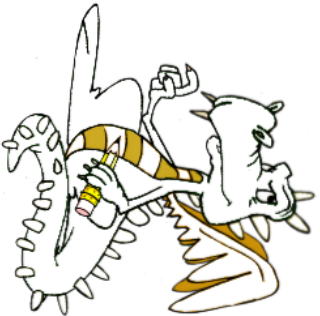
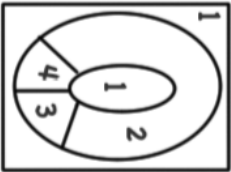
f) "Although mathematicians thought they found the proof for this conjecture in 1879 and 1880, mistakes were found in each of these proofs. Still the mathematicians learned a lot from the work they did and were able to use the information to prove other ideas (including that you need no more than 5 colors)."

i.e. Respect your and others mistakes and learn from them.

g) "So far you have been exposed to many different types of maths such as: Arithmetic, Algebra, and Geometry. This activity is part of a branch of math called Graph Theory."

_____ Color Theorem

**Four
Color
Theorem**

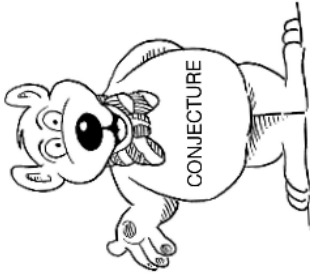


Glue

Conjecture

Proof

"I believe that this is true, but I have no proof yet."



"Using what has proven before, I can show that this theorem is also true."



Sometimes a simple idea can be very complicated to prove.

The Four Color Conjecture was proposed in 1852 by a map maker who noticed he only needed ___ colors to make any map.

His conjecture was not proven for another ___ years.

The proof developed in 1976 This was the first time a

___ was used to prove a major mathematical theorem.

Although many mistakes were made, while trying to find a solution to this problem, mathematicians learned a lot from their attempts. This knowledge later helped them prove other ideas.

Map coloring problems are studied under, the field of math, called _____

Verify the four color theorem on the map below.

