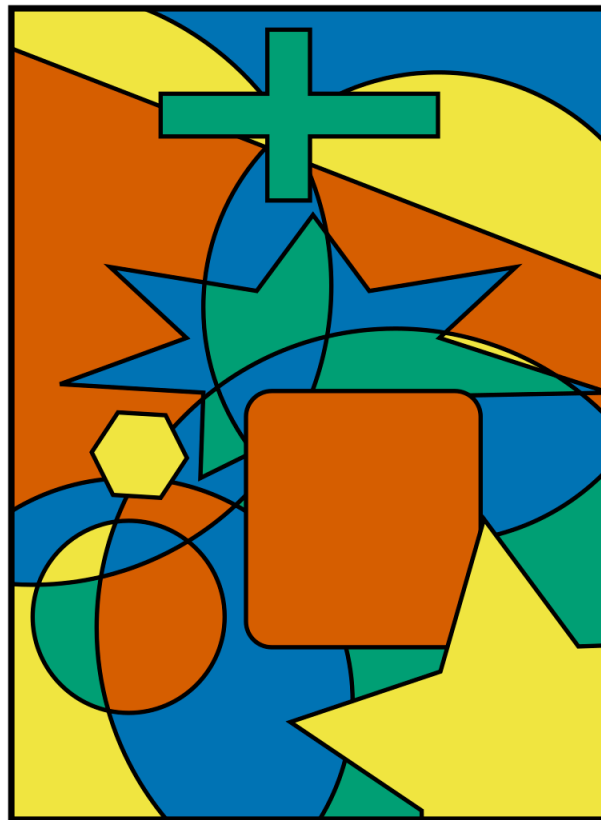


The 4 colour theorem



The 4 colour theorem

- “You only need 4 felt-tips to colour in a map”
- Proposed 1852
- Proved 1976, then correctly 1989
- 400 pages of proof
- 1,834 individual cases checked by computer

That's too easy!

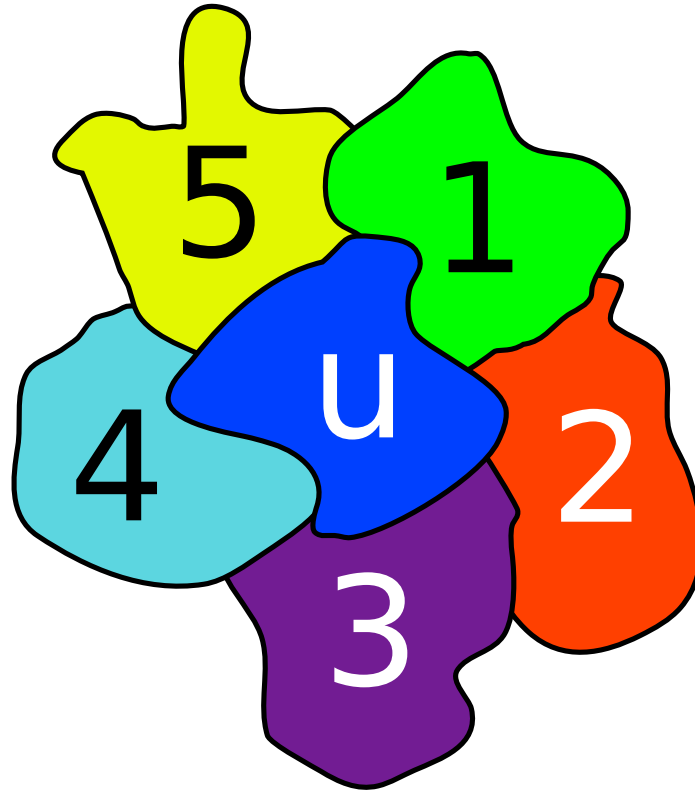
The 5 colour theorem

- “You only need 5 felt-tips to colour in a map”

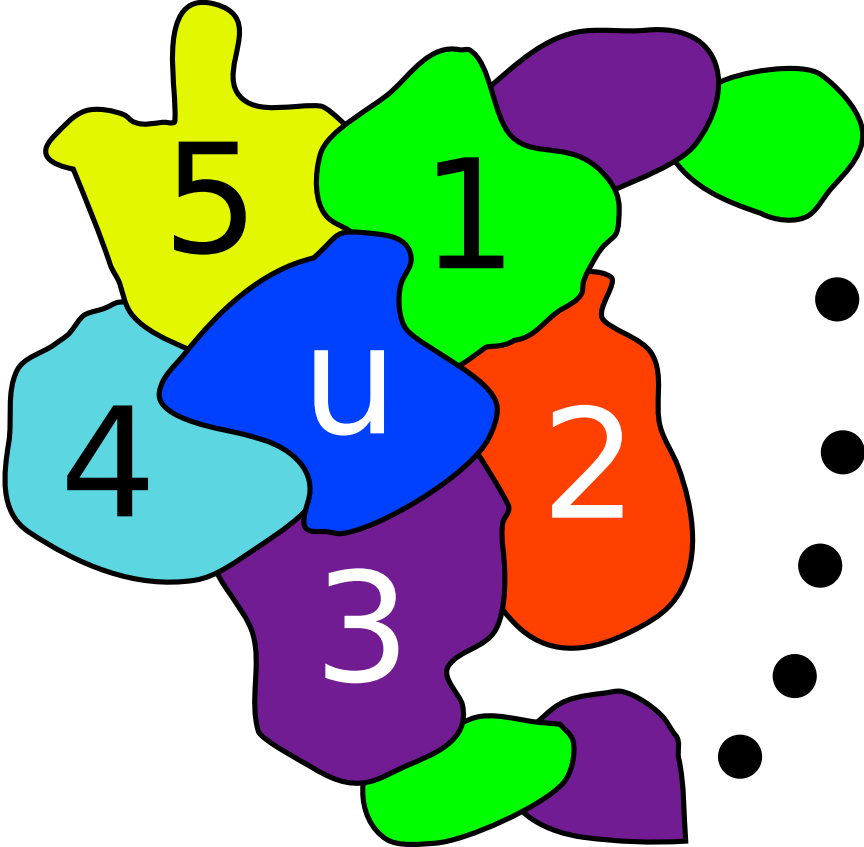
The 5 colour theorem

- The proof fits on one page
- Proof by induction, trust me
- One case left to consider...

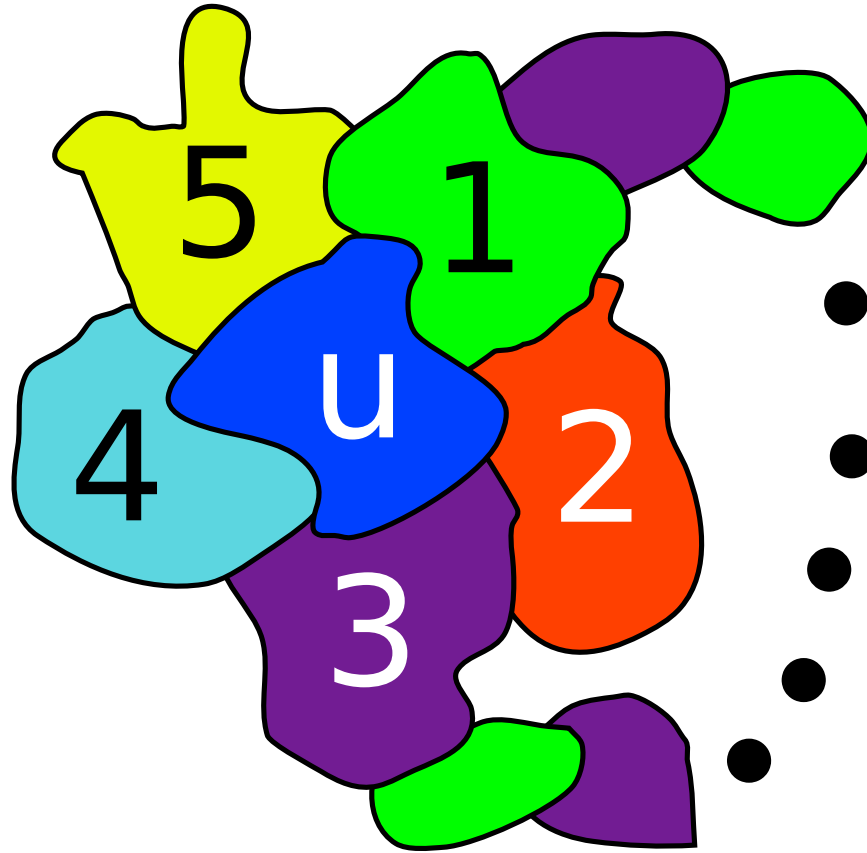
Imagine it's impossible



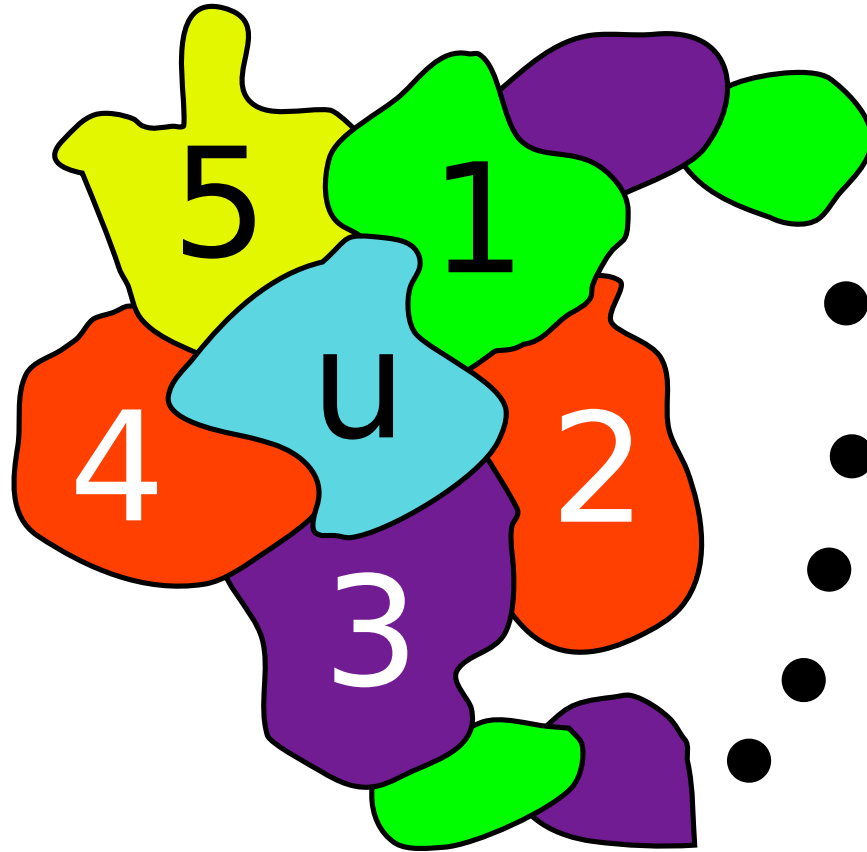
Why are 1 & 3 different colours?



But then why are 2 & 4 different colours?



Fix it



Ideas from <https://slaystudy.com/5-color-theorem/>

Q.E.D.

(Details left as an exercise for the reader)