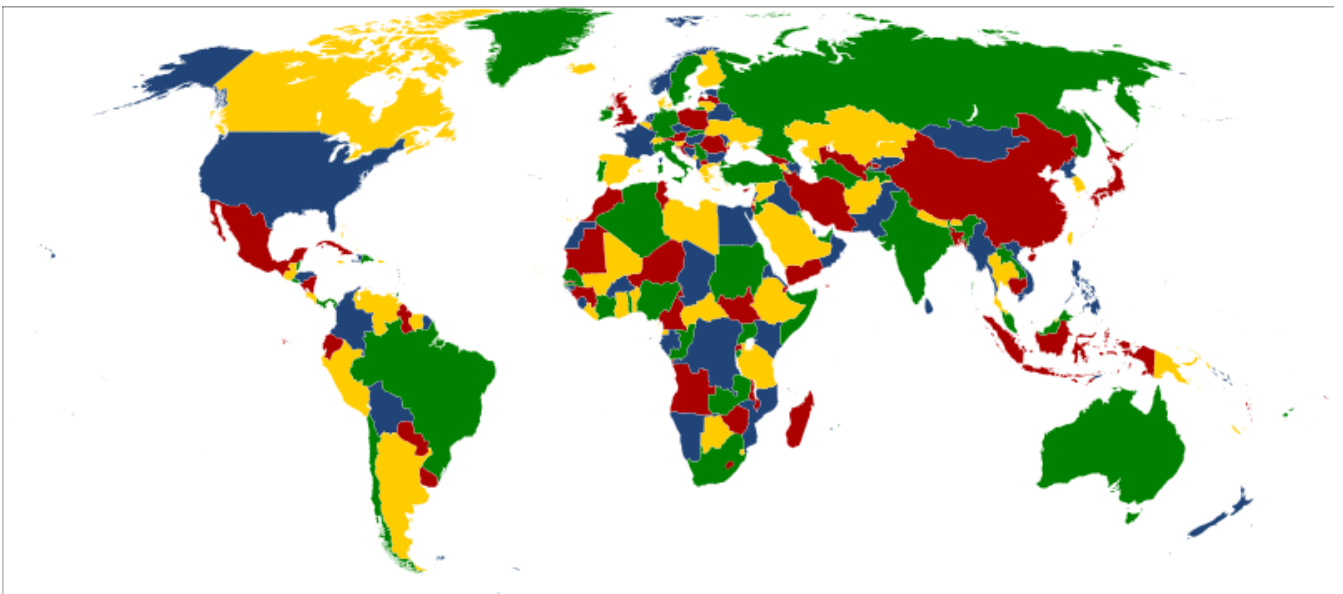# Graph Colouring (Chromatic Number)

Goal:

　　- to determine the chromatic number of a graph

What is the minimum number of colours needed to colour in a map, so that no countries that are touching have the same colour?
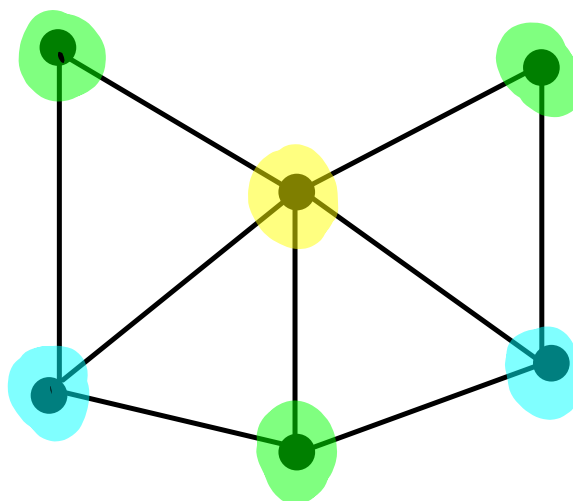
Four Colour Theorem

Every vertex in a graph can be assigned a colour. Any adjacent vertices cannot have the same colour.
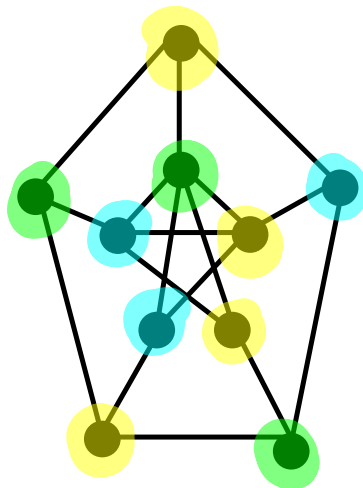
↳ connected

Then the smallest number of colours possible is called the chromatic number of the graph.

What is the chromatic number of this graph?

3

To determine the chromatic number, begin with the vertex with the highest degree. Assign a colour, then proceed to the next vertex with the highest degree and continue using as few colours as possible.

I am making a new seating arrangement. Here is a list of students that are special: