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Regulars



Puzzle page



Do five suffice? This is a hint

The problem becomes easier to deal with when you represent each country by a coloured dot and connect two dots by a line if the corresponding countries are neighbours. This gives you what is called a *graph*. An important property of this graph is that, because it comes from a map, no two lines in it cross each other.

Now look at the dots representing the new country's five neighbours and label them 1, 2, 3, 4, and 5 in cyclical order. What can stop you from recolouring dot 3 with the colour of dot 1? And what does that mean for the other dots?

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If you are stumped by [last issue's puzzle](#), here is [the solution](#).

For some challenging mathematical puzzles, see the [NRICH](#) puzzles from [this month](#) or [last month](#).



Puzzle page

Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.