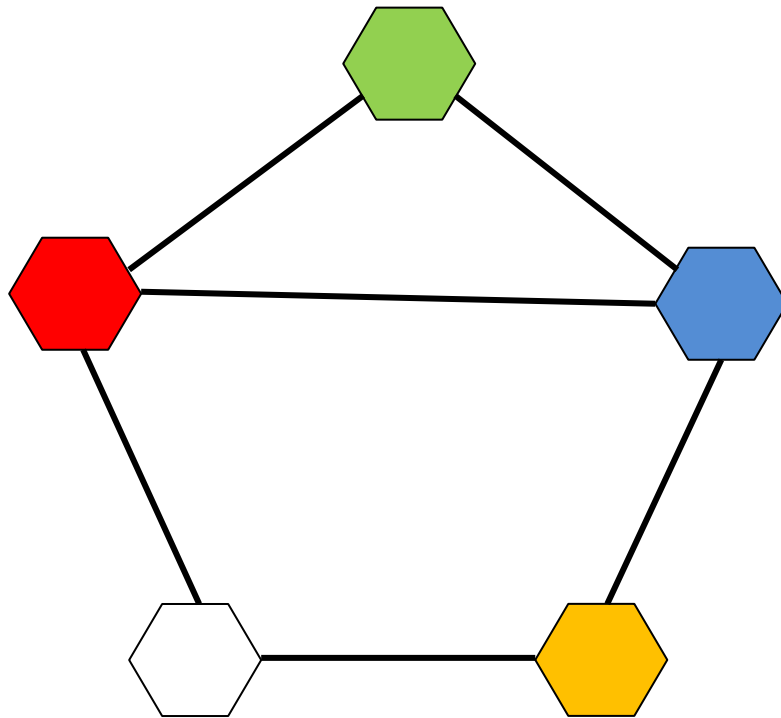


# Jumping Lizards

This is a group game. Everybody gets a distinct colour at the beginning. There is the same number of places+1, with the same colours as the people + a white place. These places are connected to each other. To start the game people stand on random colours and the goal of the game is to place everybody in his/her own colour by allowing people to move along the paths, under the condition that no two people can share the same place at any given time, or cross each other along a pass.



**Example for at most four players**

Variations: You can add any number of places you like, each with its own added colour and keep the format of the paths so that they form a polygon with a triangle inside.

## Other questions:

In how many ways can the players place themselves on the board?

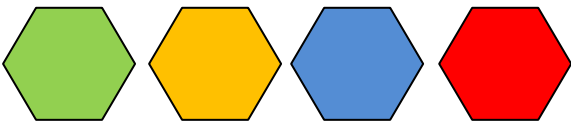
Can you explain why the game always has solutions?

What happens if you move some of the roads to connect other pairs of places? Does the game still have solutions?

### Hints:

Looking at the order of the players' colours, and comparing it with the order of the colours on the ground, which pairs of colours should be swapped? Use the triangle to do the swap.

For example, if players are arranged clockwise like this:



Then blue and yellow need to switch places. Walking clockwise on the roads making the pentagon, blue and yellow can get in two of the vertices of the triangle, and use the third vertex for the swap. Then just walking clockwise along the sides of the pentagon will bring everybody home.

### References:

The Leapin' Lizards game by ThinkFun (formerly Binary Arts).



Play it online:

<http://webpace.ship.edu/deensley/flash/LeapinLizards.html>