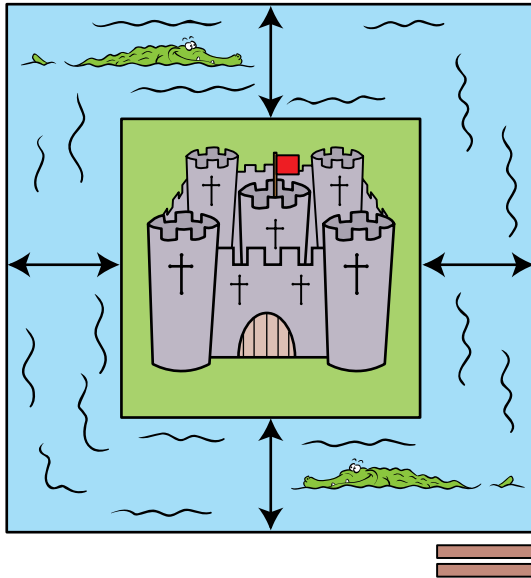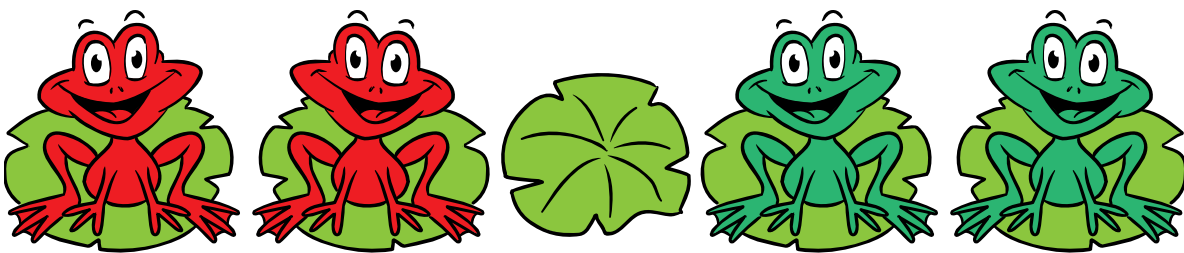## The moat problem

You are visiting a castle on an island that is surrounded by a crocodile-filled moat. The moat is 5 m wide but all you have to help you across is two 4.75 m planks. How do you get across?

Solution

The leapfrog problem

On a row of five lily-pads, two red frogs and two green frogs are sat in the order below:

The red frogs can move one place to the right or they can hop over a green frog. The green frogs can move one place to the left or they can hop over a red frog.

How can the frogs swap lily-pads so that the green frogs are where the red ones were and the red frogs are where the green ones were? What would be the least number of moves needed?

Solution

Can you work out what the least number of moves would be if there were three frogs of each colour on a row of seven lily-pads?

junior **focus**