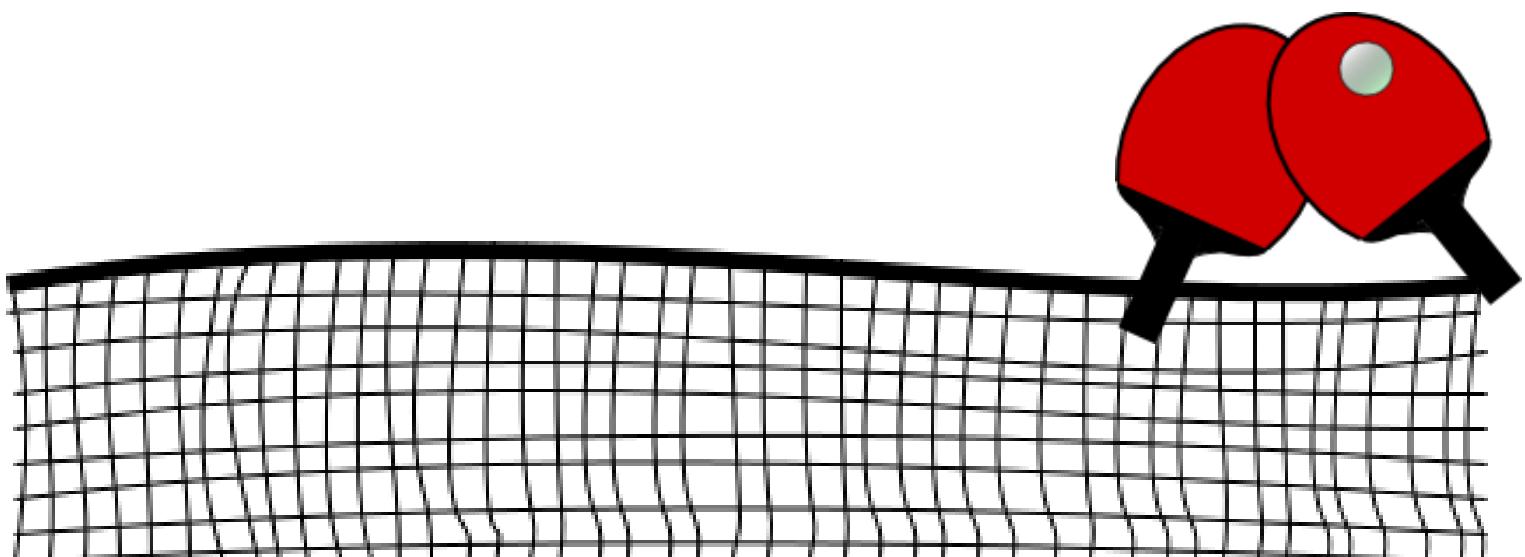




# Knock-out

**A table-tennis championship for  $2^n$  players has  $n$  rounds and is organised as a knockout tournament, with players randomly matched together at the start. The last round is the final.**

**Before the tournament starts, I decide to pick two players to support at random from the list of entrants. What is the probability that they have to play against each other at some point in the tournament?**



Thousands more problems can be found on the NRICH maths website:

<http://nrich.maths.org>