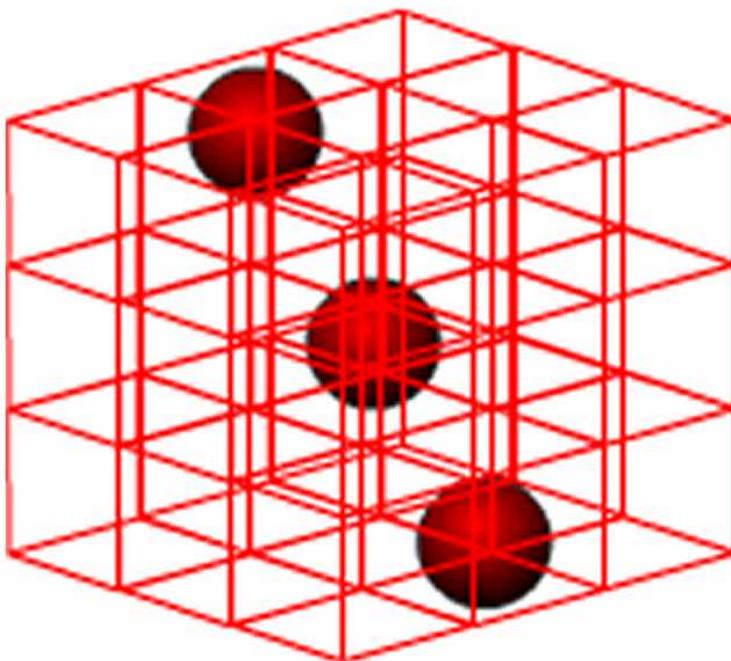




Marbles in a Box

You have 27 transparent unit cubes arranged in a 3 by 3 by 3 array and red and black marbles.



Marbles are alternately placed into the 27 cubes by two players.

The object of the game is to complete as many winning lines of three marbles as possible.

How many different winning lines are possible?

Thousands more problems can be found on the NRICH website:

www.nrich.maths.org