Exercise 8: Logical Reasoning

Arrange 15 paper clips in 3 rows with 3 in the first row, 5 in the second row, and 7 in the third row.

This is a game for two players. You win by forcing your opponent to pick up the last paper clip. When it’s your turn, you play by taking as many paper clips as you like from any row (you may take the whole row if you like) but from one row only. This is the game of NIM and is actually a logical puzzle, for the first player can always win once he knows the winning strategy. The puzzle is to figure out that strategy.

Divide into groups of 2 and try playing the game a few times, alternating who goes first. Think about what strategy to use. If you already know the answer, don’t tell! You can play to win when you go first; see if your partner can figure out your strategy.