TARGET 500

STUDENT RESOURCE

A game for 3 players or 6 players working in pairs.

In this game you need to generate random numbers between **1 and 100**, You can use the random number facility on a graphics calculator or a pack of cards numbered **1 to 100**

- One player generates two numbers between **1 and 100**. These are to be the first and last terms of an arithmetic series. If the player generates two equal or two consecutive numbers then these are discarded and two new numbers are generated.

- Each player or pair of players then works independently to find an arithmetic series with the correct first and last terms and whose sum is as close to **500** as they can get.
  For example, suppose the numbers generated are **18** and **46**.
  One possible series is **18 + 22 + 26 + ... + 46 = 256**
  and another is **18 + 25 + 32 + 39 + 46 = 160**
  Is it possible to do better than this?

- The winner is the player, or pair of players, who gets closest to **500** or, in the case of a tie, who gets there first.

- What is your strategy for finding the arithmetic series whose sum is closest to **500**?