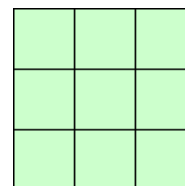
**Age 11+ Level ★★
Worksheet 1****1. Mean Square**

Can you fill this 3 by 3 grid with the numbers 1 to 9 so that the number in the middle of each line (horizontal, vertical or diagonal) is the mean of the two numbers on either side of it?

**2. Rendezvous**

The table shows the distance (in km) between five towns in southern France. Five friends live in these five towns and want to meet. In which of these towns should they meet to keep the total travelling distance as small as possible?

	Bergerac			
87		Bordeaux		
79		47	Langon	
61		31	54	Libourne
58		84	37	65
				Marmande

3. The Mean Problem

There are four unknown numbers.
The mean of the first two numbers is 4.
The mean of the first three numbers is 9.
The mean of all four numbers is 15.



If one of the four numbers is 2, what are the others?

4. Shifting Average

The average of four numbers is 48.
If 8 is subtracted from each number, what is the average of the four new numbers?

5. The Average Age

The sum of the ages of 5 teachers is 190.
The mean age of the teachers is 10 years greater than the median age. The modal age is 5 years less than the median age.
One of the teachers is 56 years old.

How old are the other teachers?

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.