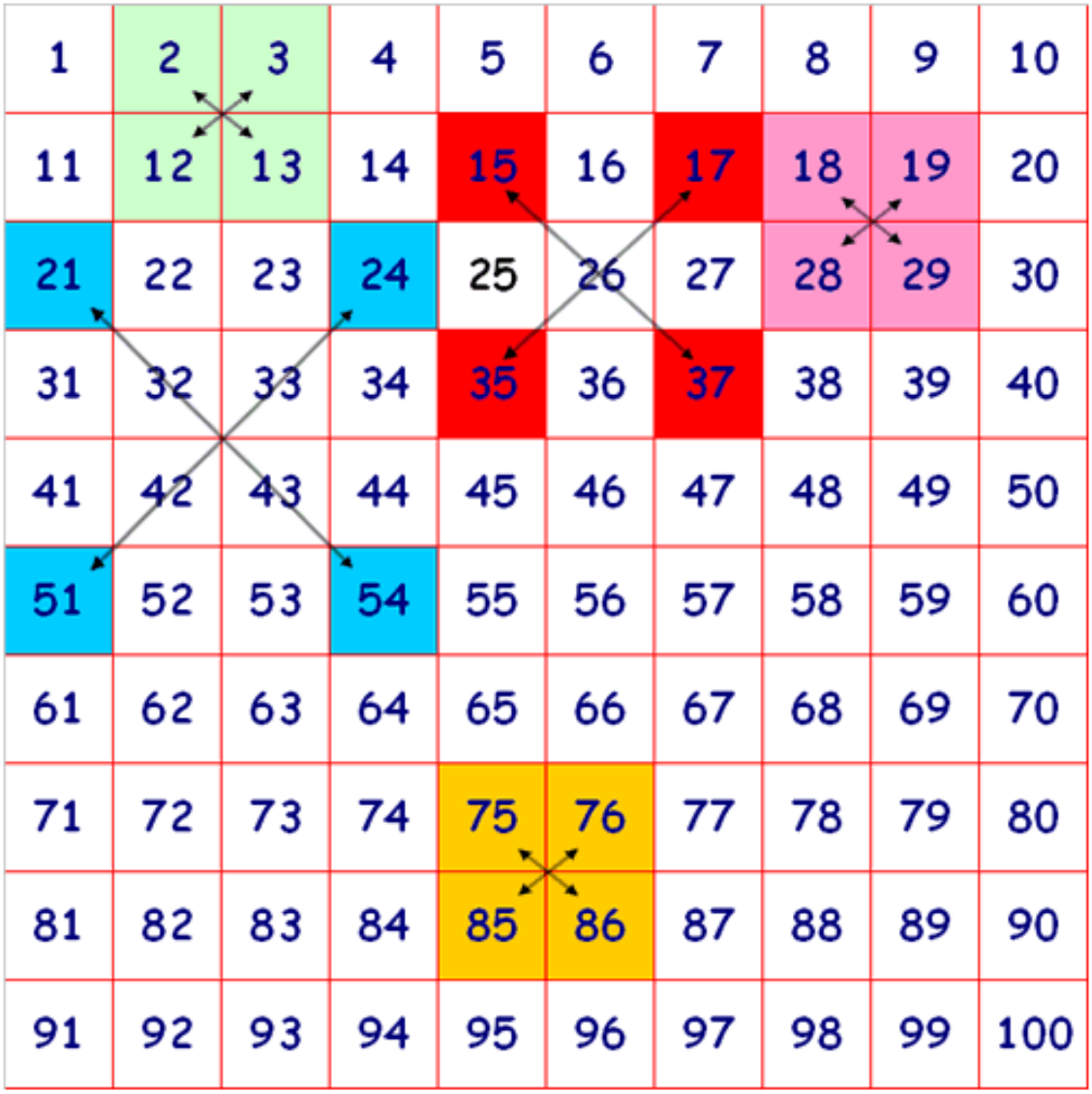
Diagonal Sums

Age 7 to 14 ★★

Here is a 100 square with some of the numbers shaded:



Look at the green square which contains the numbers $2, 3, 12$ and 13.
Do you notice anything about the sum of the numbers that are diagonally opposite each other?

Look at the pink square.
What happens this time when you look at the numbers diagonally opposite each other?
What about the yellow square?
You could try with other squares which have four numbers in them.
Can you find a reason why what you notice, happens?

Look at the squares shaded red. They form the corners of a large 3 by 3 square.
If you add the numbers diagonally opposite each other, what do you notice with this larger square?
Can you find a reason why what you notice, happens?

What happens for squares of different sizes?

You may like to print off this 100 square to try out some different squares of numbers.