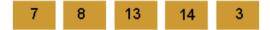Tasks taken from https://nrich.maths.org/

Sealed Solution

Sealed Solution

Age 7 to 11 ★★

A set of ten cards, each showing one of the digits from 0 to 9, is divided up between five envelopes so that there are two cards in each envelope. The sum of the two numbers inside it is written on each envelope:

7	8	13	14	3

Prison Cells

Prison Cells

Age 7 to 11 ★★

There are seventy eight prisoners in a square cell block of twelve cells. There is one prisoner in one of the cells, two in another cell, three in another, four in another and so on up to twelve prisoners in one of the cells.

The clever prison warder made it easy to check if the prisoners were all there by arranging them so there were twenty five along each wall of the prison block. How did he do it?