

## What are arrays?

Arrays are a pictorial representation to help children understand **times tables**. For example, a child may be given the following word problem:

**I have 3 bags. There are 5 pennies in each bag. How many pennies do I have altogether?**

A teacher might show the children that the first bag has five pennies and draw the five pennies in a line. Then they would explain that the second bag also has five pennies, and draw a second line. They would continue until they had drawn 3 lines of 5 pennies like this:



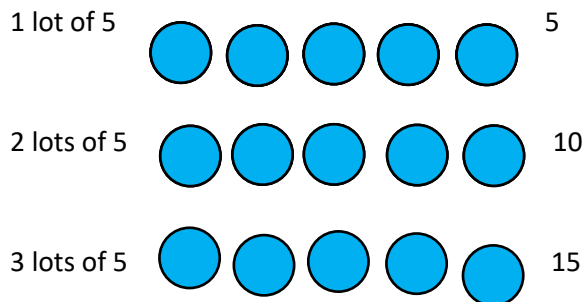
The teacher might then explain that rather than counting all the pennies individually, you could work out the answer by counting each line in 5s. The teacher could then point to each line and count 5, 10, 15 to show the children that there were 15 pennies in all.

**Teachers in Key Stage 1 will teach children how to count in 2s, 5s and 10s** and make sure they are very confident in this, before going on to show them how to work out times table problems like this one using arrays.

This is because children need to be able to count up in steps of different numbers before they can use arrays to help them.

When teaching this to the children we would use the \_\_\_ lots of \_\_\_. E.g. 3 lots of 5 or  $3 \times 5$ .

We would ask the children to draw each lot as they go:



Once all of the 'lots' have been drawn, then the children can count in 1's or 5's to get the answer.

I hope this helps to understand how to use arrays for the children's multiplication work.