

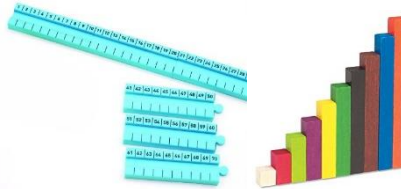
Stage 2 – Multiplication

Times Table Olympics

During this stage children will begin our school times table challenge. They will be given a weekly times table challenge sheet which they will have three minutes to complete. The challenges are tiered; Finalist, Bronze, Silver, Gold, European and Olympic. When you complete the challenge and they are all correct, you move onto the next tier earning a certificate which will be presented to you in our school celebration worship.

Cuisenaire Rods – Multiplication on a Number Line

Using these rods to multiply is very simple. Each rod has a numerical value 1-10. Children should be familiar with the value of each rod before using them to multiply. This method relies heavily on repeated addition as the focus.

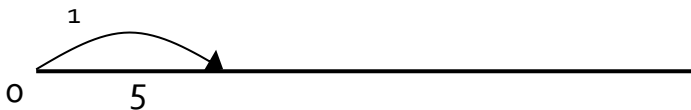


Steps to Success:

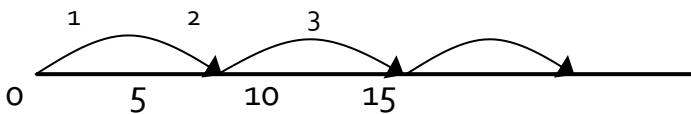
- Step 1: Read the question: $5 \times 3 =$
Step 2: Choose the rod for the right value. So we need the five rods – how many times do we need the five rod?
Step 3: Place the number of rods you need on the number line. Check – have you started the first rod at 0?
Step 4: Read the number on the number line which the final rod ends at. This is the answer.

How to record this method:

- Step 1: Draw an empty number line.
Step 2: After placing the first rod onto the number line, record this using a jump which represents that number and labelling the jump – 1.



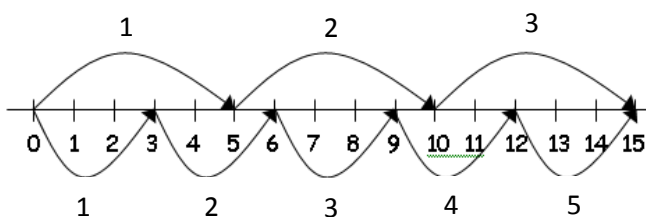
- Step 3: Continue adding the rods and recording until all the rods you need to add have been added.



- Step 4: The answer is the number that the final rod ends on. When children are confident with the method, they can choose not to use the resources but to use the written method instead.

Commutativity

Children should know that 3×5 has the same answer as 5×3 . This can also be shown on the number line.

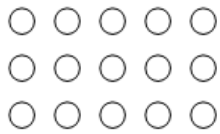


Vocabulary

Number
Numeral
Multiplication
Multiplied by
Multiple
Doubling
Array
Patterns
Lots of
Groups of
Row
Column
Multiplication fact
Multiplication table
Groups of
Times
Repeated addition

Arrays

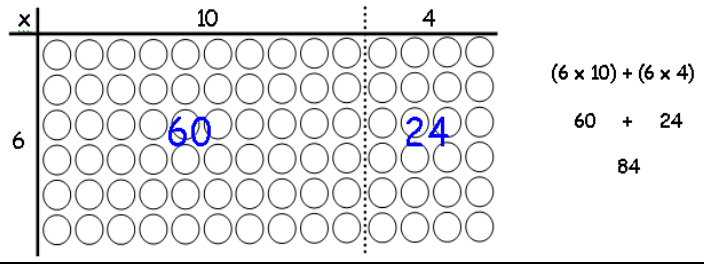
Children should be able to model a multiplication calculation using an array. This knowledge will support with the development of the grid method which is introduced in later stages.



$3 \times 5 = 15$

$5 \times 3 = 15$ 3 rows of 5 / 3 groups of 5 / 5 groups of 3 / $3 \times 5 = 15 / 5 \times 3 = 15$

Children will use partitioning when multiplying larger numbers. Where necessary they should be encouraged to still picture the groups in arrays if it helps their understanding. Children can use base 10 and place value counters for this.



Steps to Success:

Step 1: Draw the table, partition the two digit number. Write the tens number first followed by the ones number in the next column.

Step 2: Use resources of your choice to work out the tens number multiplied by the single digit number. 6×10

Step 3: Record as above.

Step 4: Use resources to work out ones x ones. Record as above.

Step 5: Add both values together using the concrete resources before recording as above.