Year 3 Key Skills

Addition

- Read and write numbers to 1000 in numerals and words.
- Add 2-digit numbers mentally, including those exceeding 100.
- Add a three-digit number and ones mentally (175 + 8)
- Add a three-digit number and tens mentally (249 + 50)
- Add a three-digit number and hundreds mentally (381 + 400)
- Estimate answers to calculations, using inverse to check answers.
- Solve problems, including missing number problems, using number facts, place value, and more complex addition.
- Recognise place value of each digit in 3-digit numbers (hundreds, tens, ones.)
- Continue to practise a wide range of mental addition strategies, i.e. number bonds, adding the nearest multiple of 10, 100, 100 and adjusting, using near doubles, partitioning and recombining.

In order to carry out this method of addition:
- Children need to recognise the value of the hundreds, tens and units without recording the partitioning.
- Pupils need to be able to add in columns.
- Start with adding the units, in preparation for the compact method.

	2	7	8
+		9	4
	3	7	2
		1	0
	1	0	0

```
    2 3 6
 +    7 3
        9
    1 0 0
    2 0 0
    3 0 9
```

Move to the compact column addition method, with "carrying":
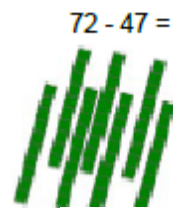
Subtrac-   tion

- Subtract mentally a: **3-digit number and ones, 3-digit number and tens, 3-digit number and hundreds** .
- Estimate answers and use inverse operations to check.
- Solve problems, including missing number problems.
- Find 10 or 100 more or less than a given number.
- Recognise the place value of each digit in a 3-digit number .
- Counting up differences as a mental strategy when numbers are close together or near multiples of 10 (see examples above)
- Read and write numbers up to 1000 in numerals and words.
- Practise mental subtraction strategies, such as subtracting near multiples of 10 and adjusting

$$89 - 35 = \underline{54}$$
$$80 + 9$$
$$- 30 + 5$$
$$50 + 4$$

$$72 - 47 =$$

$$\begin{array}{r} 60 \\ 7\!\!\!/0 + {}^{1}2 \\ - 40 + 7 \\ \hline 20 + 5 \end{array} = \underline{25}$$

Estimate
Calculate
Check it!

```
  2 3 8 - 1 4 6 = 9 2
    1 0 0
    2 0 0 + 3 0 + 8
 -  1 0 0 + 4 0 + 6
        0 + 9 0 · 2
```

Year 3 Key Skills

Multiplication

- Recall and use multiplication facts for the **2, 3, 4, 5, 8 and 10** multiplication tables, and multiply multiples of 10.
- Write and calculate number statements using the multiplication tables they know, including **2-digit x single-digit**, drawing upon mental methods, and progressing to reliable written methods.
- Solve multiplication problems, including missing number problems.
- Develop mental strategies using commutatively (e.g. 4 x 12 x 5 = 4 x 5 x 12 = 20 x 12 = 240)
- Solve simple problems in contexts, deciding which operations and methods to use.
- Develop efficient mental methods to solve a range of problems e.g. using commutatively (**4 × 12 × 5** = 4 5 × 12 **= 20 × 12** = 240) and for missing number problems x 5 = 20, 3 x = 18, x = 32
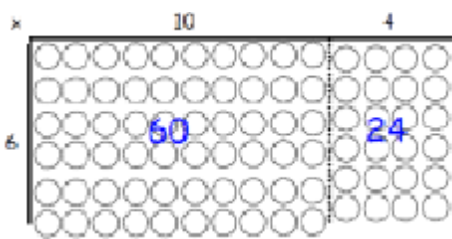
x	20	3
8	160	24

160 + 24 = 184

Make the link between an array and the grid method

- Recall and use multiplication and division facts for the 2, 3, 4, 5, 8 and 10 multiplication tables (through doubling, connect the 2, 4 and 8s).
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Solve problems, in contexts, and including missing number problems, involving multiplication and division.
- Pupils develop efficient mental methods, for example, using multiplication and division facts
- (e.g. using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3) to derive related facts (30 × 2 = 60, so 60 ÷ 3 = 20 and 20 = 60 ÷ 3).
- Pupils develop reliable written methods for division, starting with calculations of 2-digit numbers by 1-digit numbers and progressing to the formal written method of short division
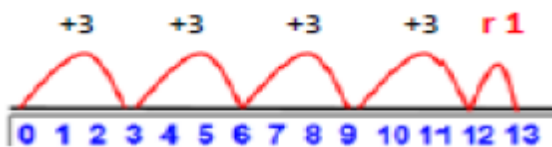
Step 1: Grouping on a number line

Step 2: Grouping on a number line

87 ÷ 4 = 21 r3

5 x 4 = 20
10 x 4 = 40