Year 4 Written Methods of Calculation

ADDITION	SUBTRACTION	MULTIPLICATION	DIVISION

ADDITION

Written method used in addition calculations in Year 4 are outlined below.

Expanded Partitioning Method

$879 + 45 = 924$

$$800 + 70 + 9$$
$$40 + 5$$
$$\overline{800 + 110 + 14}$$

Vertical expanded Method of Addition

```
  5 8 7
+ 6 7 5
    1 2
  1 5 0
1 1 0 0
1 2 6 2
```

Standard Method of Column Addition

```
    5 8 7
  + 6 7 5
  1 2 6 2
    1 1
```
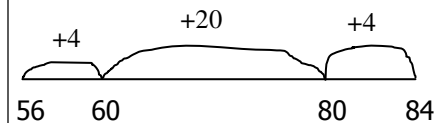
SUBTRACTION

Written method used in subtraction calculations in Year 4 are outlined below.

Complimentary Addition
Using empty numberlines

$84 - 56 =$


```
        +20
  +4           +4
56   60      80   84
```

$84 - 56 = 28$

Expanded Partitioning Method
$643 - 98 = 545$

```
  500    ¹30
  600 + 40 + ¹3
        90 +  8
  500 + 40 +  5
```

Standard Method of Subtraction
(decomposition)

```
  5  13
  6  4̶ 6        ³4̶ ¹0 9
- 2  6 8       - 2 7 6
  3  7 8         1 3 3
```

For numbers which need to be subtracted but are close together, children would be encouraged to count on in their heads, maybe with jottings.

MULTIPLICATION

Written method used in multiplication calculations in Year 4 are outlined below.

Grid Method

```
x │ 30 │ 7
7 │210 │ 49
```

$210 + 49 = 259$

This is then extended to include 3 digit by 1 digit calculations.
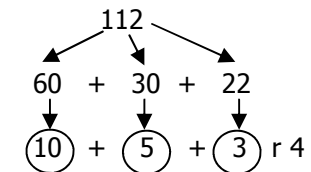
DIVISION

Written method used in division calculations in Year 4 are outlined below.

Remind children about using their times tables and about dividing by 10.

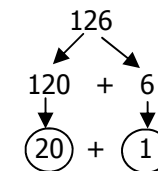Partitioning the Dividend Method
Early Chunking

$112 \div 6$ lies between $60 \div 6 = 10$ and $120 \div 6 = 20$

Partition the dividend into multiples of the divisor.


```
            112
      60  +  30  +  22
      (10) + (5) + (3) r 4
```

Answer: 18 r 4

$126 \div 6 =$


```
          126
      120  +  6
      (20) + (1)
```

Answer: 21