Addition

Continue **bridging and partitioning** from year 2 extending to larger numbers

Partitioning

240 + 110
= 200 + 100 + 40 + 10
= 300 + 50
= 350

Unitising

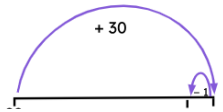
240 + 110
= 24 tens + 11 tens
= 35 tens
= 350

Redistribution (move 1 addend to another)

320 + 196 =
−4 ↓ ↓ +4
316 + 200 = 516

Compensation (**change one number to make the calculation easier**, then **adjust back** to keep the total correct.)

22 + 29 = 51
+1 ↓ ↑ −1
22 + 30 = 52



320 + 290 = 320 + 300 − 10
= 620 − 10
= 610

Column addition (4-digit numbers)

6,185 + 2,738 = 8,923

	1000s	100s	10s	1s
	6	1	8	5
+	2	7	3	8
	8	9	2	3
		1	1	

	1000s	100s	10s	1s
	6	3	7	8
	2	5	5	3
+	1	0	4	1
	9	9	7	2
		1	1	

Subtraction

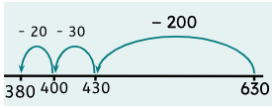
Partitioning

630 − 250 = 380
200 50

Unitising

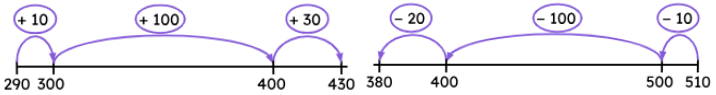
680 - 540 = 140
68 tens - 54 tens = 14 tens
50 4

Bridging



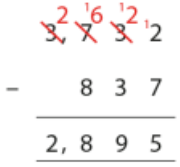
Difference (counting on or counting back)

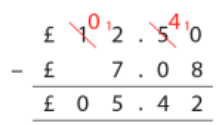
430- 290 =140



510 – 380 =130

Column subtraction (4-digits and money)





Compensation- (**both whole and part change by the same amount so difference remains the same**)

	1000s	100s	10s	1s		1000s	100s	10s	1s
	6	0	0	0	−1 →	5	9	9	9
−	2	3	4	8	−1 →	− 2	3	4	7
						3	6	5	2

Multiplication

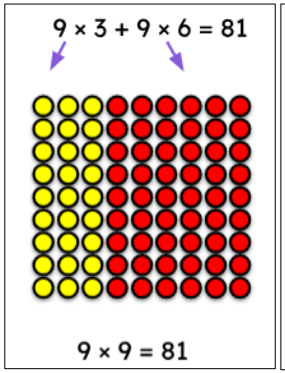
Distributive law (partitioning)

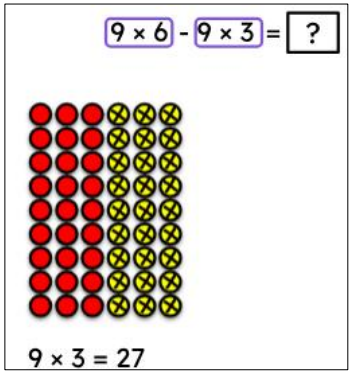
The **distributive law** says that multiplying a number by a group of numbers added together is the same as doing each multiplication separately. For example:

$4 \times 3 = 2 \times 3 + 2 \times 3 = 12$

2 2

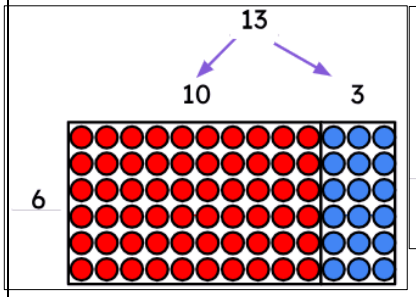
Looking for common factors

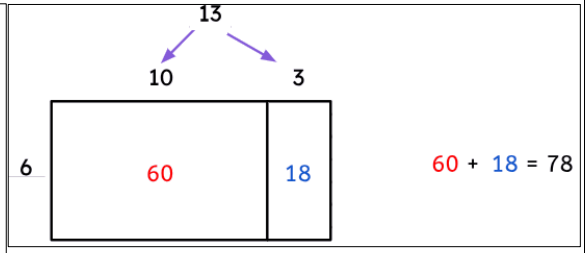




Distributive law 2 digit x 1 digit (partitioning)

6 x 13 = 6 x 10 + 6 x 3 = 60 + 18 = 78

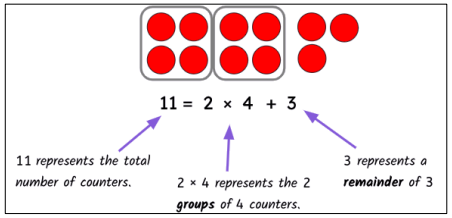


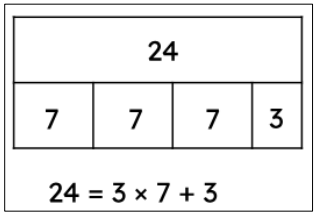


Division

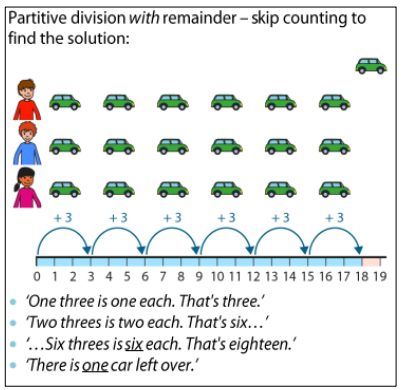
Division with remainers:

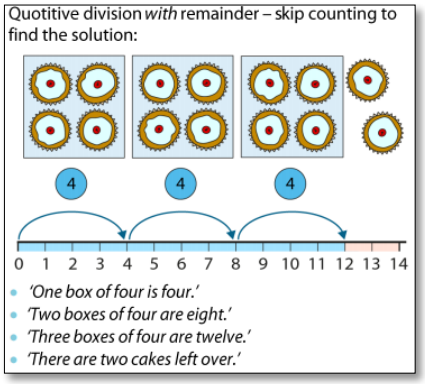
Using multiplication facts





Skip counting forwards or backwards:





Sharing: 19 ÷ 3 = 6 r1

Known facts: 19 = 3 x 6 + 1

32 ÷ 5 = 6 r 2

Grouping: 14 ÷ 4 = 3 r2

14 = 4 x 3 + 2

Six 6s are equal to 36, but we only have 32 pear drops, so we must choose the multiplication fact that is less than or equal to 32

$6 \times \square$ is less than or equal to 32

6×5





In Year 4, Oak expects pupils to record multiplication using partitioned and grid methods that make place value and partial products explicit, deliberately delaying short multiplication until Year 5.

Oak develops division through **multiplicative structures**, **partitioning**, and **remainders**, preparing pupils for short division in Year 5.