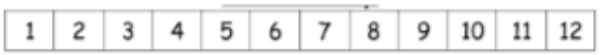
Written Calculations – Humberstone Academy

Addition

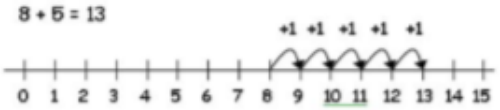
Subtraction



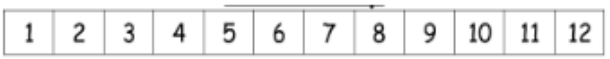
5 + 4 = 9

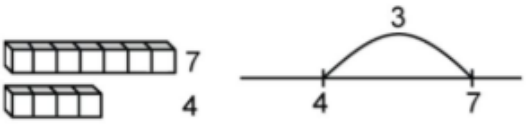
'Put your finger on number five. Count on (count forwards) four.'

Then progress to a marked number line:

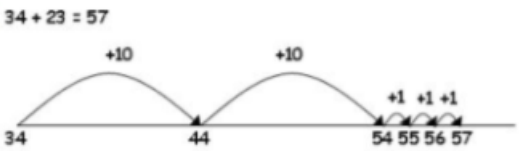


Number track and marked number line

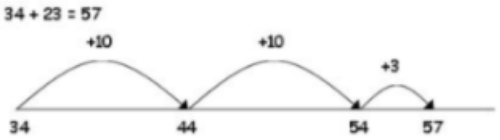




Number track and marked number line



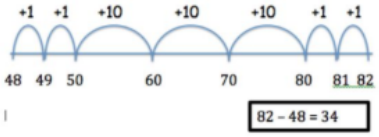
and in tens and adding units in one jump



partially marked number line

Progress to 2 digit subtractions

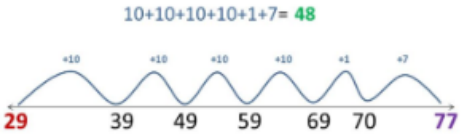
Subtracting by finding the difference using a number line:



Partially marked number line
Counting on to find the difference

	10		
300 + 60	+	5	
500 + 20	+	7	
800 + 90	+	2	= 892

Expanded column



77
- 29

Counting on in tens then ones

789 + 642 becomes

compact column

	7	8	9
+	6	4	2
1	4	3	1
	1	1	

Answer: 1431

	20	5	
	10	4	-
	10	1	= 11

Expanded column

compact column

124.9	
+ 7.25	
132.15	
1 1	

Then different number of decimal places

compact column

		9	
	7	1	1
8	0	2	
2	4	7	-
5	5	5	

compact column

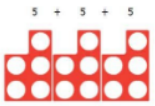
Then different number of decimal places

Written Calculations – Humberstone Academy

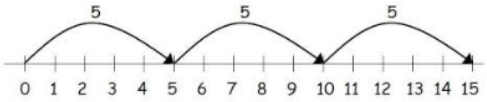
Multiplication

Division

4x2 = 8

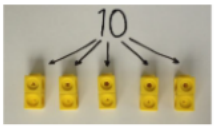


Repeated addition

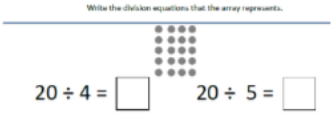


Number tracks and number lines

Division as sharing **Division as grouping**

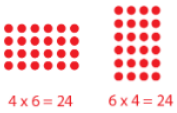


Division in arrays



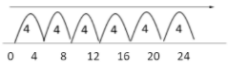
practical resources and arrays with signs

strengthen their use of the number line for larger numbers



Number lines

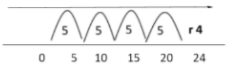
(count in groups from 0 – just as when multiplying)



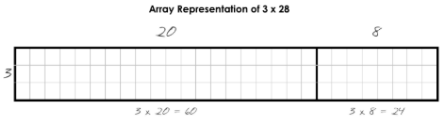
Progressing to:

24 ÷ 5 = 4 r 4

Introducing concept of quotients with remainders.



number lines

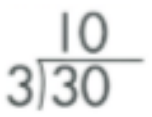


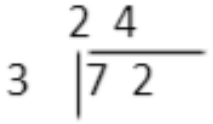
Progress to expanded written methods only if applicable using concrete or visual support to aid understanding. **Grid Method**

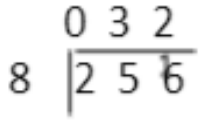
×	30	5
7	210	35

210 + 35 = 245

Grid method – expanded number







Short division

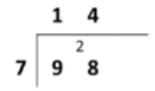
Progress to column multiplication of compact number

	1	2	x
		3	
		6	(2 x 3)
	3	0	(10 x 3)
	3	6	(add together totals)

Column multiplication expanded

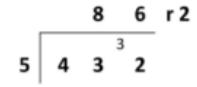
Short division

98 ÷ 7 becomes



Answer: 14

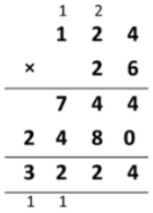
432 ÷ 5 becomes



Answer: 86 remainder 2

Short division with remainders

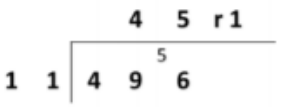
124 × 26 becomes



Answer: 3224

column multiplication compact

496 ÷ 11 becomes



Answer: $45\frac{1}{11}$

Short division – two digits