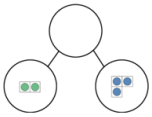
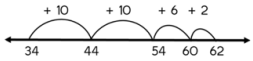
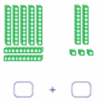
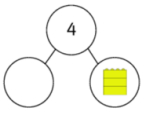
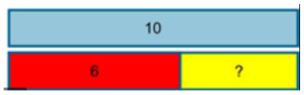
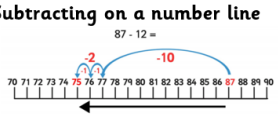
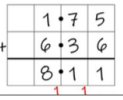
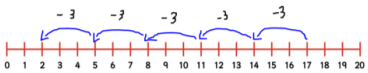
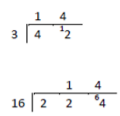
Hambrook Calculation Policy
Calculations (KS1)

Addition	Subtraction	Multiplication	Division
Whole part whole method  **Bar model** 6 + 2 = 8  **Adding on a number line** 34 + 28 = 62  **Use of hundred square/ bead string** TO + multiple of 10 (e.g. 56 + 20) **Partitioning method/ drawing base 10** TO + TO 70 + 23 70+20=90 90 + 3 = 93 	**Whole part whole method**  **Bar model**  **Subtracting on a number line**  **Use of hundred square/ bead string** TO - multiple of 10 (e.g. 56 - 20) **Partitioning method/ drawing base 10** TO – TO= 54-21= 54 – 1= 53 53 – 20 = 33 	Showing multiplication using Numicon e.g. 3 x 2 (three lots of two)  e.g. 2 x 3 (two lots of three)  **Partitioning Method** 12 x 3 10 x 3 = 30 2 x 3 = 6 To know the 2x 5x 10x table written "as lots of" 1x2=2, 2x2=4, 3x2=6 Inverse facts between multiplication and division using Numicon	Halving numbers e.g. Half of 12 = 6 Halving two digit even numbers using Numicon e.g. Half of 42 = 21 Simple fractions of objects or numbers (half or quarter) Linking division to sharing using objects e.g. bricks Division using grouping (with Numicon) e.g. 6 ÷ 2 = 3  "How many groups of 2 are there in 6?

Hambrook Calculation Policy
Calculations (KS2)

Addition	Subtraction	Multiplication	Division
Number line (as above) **Partitioning Method** (as above) **Developing into only partitioning one number** 34+10+5 (Once proficient, this becomes a mental calculation strategy) **Column addition** without carrying **Column addition** with carrying (using equipment in year 3 & 4) 76 +47 123 1 **Progressing to column addition** of money, decimals and four digit numbers.  	**Number line** (as above) **Partitioning Method** (as above) **Column Subtraction without exchanging** Pupils **must** subtract the ones first **Column subtraction** with exchanging in any column – e.g. exchanging hundreds and tens and units. Using apparatus in year 3 & 4 when required. 6 1 – 4 8 2 8 **Progressing to column subtraction** of money, decimals and four digit numbers. Using a number line to calculate differences: negative numbers, time problems, differences between positive and negative numbers.	**Partitioning Method** 12 x 3 10 x 3=30 2 x 3=6 **30+6=36** **Compact Column Method** 7 2 X 3 2 1 6 **Compact Column method for TO.t x O** 21.8 X 3 65.4 2 **Long multiplication** TO x TO 32 X 15 160 320 480	**Year 3 Transition** Using Numicon to divide (see KS1), repeated subtraction and applying times tables to empty number line. How many groups of 3 in 17? e.g. 17 ÷3 = 5 r 2  **Dividing using the 'compact' method up to three digit divided by two digit.**  **Dividing using long division** 1 6 | 2 2 4 – 1 6 0 = 6 4 – 6 4 = 0 Write the remainder as a fraction or decimal.