Year 1 Calculation Policy

Addition			
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
1A.1 I know all pairs of numbers which make all numbers upto 12, and pairs with a total of 20	20 = 1+19 2+18 3+17		+ 8 = 20 20 = + 11 is a part, is a part, The whole is 5 + 12 =
I can start by counting from the bigger number.	12 + 5 = = 12 + 5	12 + 5 = 17 $10 + 12 + 3 + 15 + 16 + 17 + 16 + 19 + 20$ $0 + 0 = 0 = 0 = 0 = 0$	5 + 12 = 12 + 5 = $_= 5 + 12$ + 12 + 5 Know that addition can be done in any order. Start with the number with the most value and add the smaller number.
1A.2 I can use number facts to add 1 digit numbers to 2 digit numbers (e.g. 4+3=7 so 14+3=17 and 24+3=27)		::+: :::. I::+:. = I:::. I::+:. = I:::.	4 + 3 = 7 So 14 + 3 =17 So 24 + 3 =7 34 += 37
1A.3 - I can add ones using a structured number line/ 100 grid	1 2 3 4 5 7 5 10 1 2 1 4 5 7 5 10 1 2 1 4 5 7 5 10 1 2 1 4 5 7 5 10 1 2 1 4 5 7 7 10 1 2 1 4 5 7 7 10 1 2 2 4 5 7 7 10 <t< td=""><td>0 10 20</td><td>The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? 4 + 2</td></t<>	0 10 20	The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? 4 + 2
1A.4 - I can add 10s using a structured number line/100 grid	Humber Square Res 4 6 8 1 8 10 1 727 24 6 8 1 8 10 1 727 24 8 3 8 2 7 10 55 1 727 24 8 3 5 27 10 55 1 727 24 25 30 50 1 727 24 25 30 1 727 24 30 1 72	$\begin{bmatrix} 2 & 3 & 1 & 6 & 6 & 7 & 1 & 1 & 2 & 3 \\ \hline 3 & 2 & 3 & 1 & 1 & 7 & 2 & 2 & 3 & 3 \\ \hline 3 & 2 & 3 & 4 & 5 & 6 & 47 & 64 & 66 \\ \hline 5 & 3 & 6 & 6 & 6 & 66 & 1 & 66 & 1 \\ \hline 5 & 1 & 6 & 6 & 6 & 66 & 1 & 66 & 1 \\ \hline 0 & 1 & 2 & 0 & 30 & 40 & 50 & 60 & 70 & 80 & 90 & 100 \end{bmatrix}$	$26 + 10 =$ $_ = 34 + 10$ $_ = 10 + 17$ $28 + _ = 38$

Year 1 Calculation Policy

Subtraction			
Learning			
Ladders			
Statement	Concrete	Pictorial	Abstract
1S.1 -I know all the subtraction facts to 12 and pairs that make 20		ØØØØØØØØ 8-7=1	4-3 = 2 = 4-3 $4 = 3 = 2$ $4 = 3$ $4 = 3$ $7 = 3$ $4 = 3$ $7 = 3$ $4 = 3$ $7 = 3$ $7 = 3$ $7 = 3$ $7 = 3$
1S.2 - I can use number		dada	8-7 = 1
facts to subtract 1-	8-7=1		18 – 7 = 11
digit numbers from 2-digit	18 - 7 = 11	18-7=11	28 -7 = 21
numbers (e.g. 7-2=5 so 17-2=15, 27- 2=25)	28-7=21	00000 28-7=21	? – 7 = 31
Finding a difference How many less / fewer? How many more?	Calculate the difference between 8 and 5.	Finding the difference is subtraction	Find the difference between 8 and 5. 8 – 5, the difference is
1S.3 - I can	Counting back (using number lines or number tracks)	0.0.4	16 – 4 = 12
ones using a structured	children start with 6 and count back 2. 6 - 2 = 4	6-2=4	15 – 3 = ?
number line/ 100 grid		012345678910	Am I right?
	1 2 3 4 5 4 7 8 7 9 1 12 3 4 5 4 7 8 7 9 1 12 3 4 15 4 17 8 7 9 1 12 3 14 15 16 7 8 7 9 19 20		15 – 5 = 17
	u u u u u u u u u u u u u u d1 u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u u </td <td></td> <td>How do you know?</td>		How do you know?
1S.4 - I can count back in tens using a 100 grid	1 2 3 4 3 6 3 8 30 11 12 13 14 15 14 12 14 10 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 13 22 12 14 15 14 12 12 12 14 42 12 14 15 14 12 12 12 14 42 12 14 15 14 12 12 12 15 14 15 14 15 14 12 12 12 14 14 14 14 15 14 12 12 12 15 15 14 15 14 15 14 12 12 15 15 14 15 15 15 15 16 16 16 15 14 15 15 15 16 17 17 16 17 16 15 16 16 16 1	I 2 3 4 3 6 3 8 3 10 III 11 11 11 11 11 11 11 10 10 III 12 20 14 10 14 10 10 10 10 III 12 12 12 12 12 12 12 12 10 10 10 III 12 12 12 12 12 12 12 12 12 12 12 12 III 12 12 13 14 14 14 14 10 10 III 12 13 14 14 14 14 14 14 14 III 12 13 14 14 14 14 14 14 14 III 12 13 14 14 14 14 14 14 14 III 12 13 14 14 14 14 14 14 14 III 12 13 14 14 14 14 14 15 16 III 12 <td>10 40 54 54 54 54 54 54 54 54 57 67 67 67 67 67 67 67 67 67 6</td>	10 40 54 54 54 54 54 54 54 54 57 67 67 67 67 67 67 67 67 67 6

Year 1 Calculation Policy



Year 1 Calculation Policy

Division			
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
1D.1 - I can find half of even numbers to 12 and know it is hard to halve odd numbers			Half of 8 is 4 ¹ ⁄ ₂ of 12 = 6

Year 2 Calculation Policy

Addition			
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
2A.1 - I know all number facts upto 20			20 ? 0 18 = 12 + 6
		$\begin{bmatrix} 0 & + & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0$	12 + 7 = 19 20 = + 9
2A.2 - I can use related facts to add multiples of 10 and 100 e.g. 6 +3 = 9 so 60+30=	$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $	(3) (3) (30) (30) (30)	3 + 3 = 6 3 tens + 3 tens = 6 tens
			30 + 30 = 60
I can 3 1-digit numbers looking for number bonds and doubles	4 + 7 + 6 = 4 + 6 = 10 10 + 7 = 17	4 + 7 + 6 = 17 $4 + 7 + 6 = 17$ $4 - 7 - 6$ $4 - 7 - 6$ $4 + 6 + 7$ $4 + 6 + 7$ $10 + 7$	4 + 7 + 6 = 10 + 7 = 17
2A.3 - I can partition a number to add using number bonds to 10 (e.g. $8 + 7$ is $8 + 2 + 5$; $57 + 5 = 57 + 3 + 2 = 62$	57 + 5 57 + 5 57 + 5 57 + 5 57 + 5 57 + 5 52 - 52	57+5 = 32 60+2 = 62	57 + 5 = 62 57 + 5 57 + 3 + 2 = 62
2A. 4 - I can add multiples of 10 to any number using a 100 grid	Number Square 1/2 3/4 1/2 1/4	2 3 5 6 7	34 + 40 = 74 74 = 34 + 40 74 = 40 + 34 $74 = __ + 34$ $34 + __ = 74$
2A.5 - I can add any pair of 2- digit numbers using an unstructured number line (e.g. 23+12 = 23 +10+2)	Adding + 48 + 25 - stort with live larged number 48 68 73	23 + 12 = + 10 +2 23 33 35	23+12 = 23 +10+2

Year 2 Calculation Policy

Subtraction			
Learning			
Ladders			
Statement	Concrete	Pictorial	Abstract
2S.1 - I know all subtraction facts to 20	20 - 12 = 8		20-8=? 20-12=? 8=20-? ?=20-12 16-5 = 13-
2S.2 I can use related facts to subtract multiples of 10 and 100 e.g. 6 - 4 = 2 so $60 - 40 =20$	6 - 4 = 2 60 - 40 = 20		I know 6 minus 4 so I know 60 subtract 40. 6 - 4 = 2 60 - 40 = 20
2S.3 - I can subtract a 1 digit number from a 2- digit number using number facts (e.g. 52-6=52-2- 4=46)	52 - 7 $52 - 7$ $2 + 5$ $52 - 2 = 50$ $50 - 5 = 55$ $50 - 5 = 55$ $50 - 7 = 55$	52 - 7 2 + 5 52 - 2 - 5 = 45 50 52 $-5 - 5^{2}$	52 – 7 = I know 2 and 5 = 7 so I do 52 – 2 – 5 =
2S.4 - I can count back in multiples of 10s from any 2 digit number using a hundred grid	Number Square		43- 20 = 23
2S.5 - I can takeaway 10s and 1s from a 2- digit number using an unstructured number line	34 - 21 $34 - 21$ $13 (4 - 34)$ -20	37 - 12 = 25 25 27 37 -2 -10	46 - 32 = $? = 56 - 45$ $46 - ? = 32$ Missing number in the middle subtract to solve the riddle $46 - 32 = ?$
2S.6 - I can subtract any pair of 2 digit numbers by counting on (FROG) in 1s and 10s using an unstructured number line	26 - 15 = 26 - 15 = 11 $4 + 5 + 5 + 6 = 15 = 26 - 15 = 11$ $4 + 5 + 6 = 15 = 20 = 26$ $6 + 5 = 11$	26 - 15 = 5 + 6 = 11 $15 \circ \circ$	72-66 = Count on to the next multiple of 10. What is the next multiple of 10?

Year 2 Calculation Policy				
Multiplication				
Learning Ladders				
Assessment Statement	Concrete	Pictorial	Abstract	
2M.1 - I can count in 2's, 5's and 10's from zero		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5, 10, 15, 20, 25, 30,,	
		0 5 10 15 20 25 30		
	Surger Surger Surger			
2M.2 - I can count in 3s	3+3+3	Counting In 3s Missing Numbers Number Line 0 - 18 24 27 ↓ ↓ ↓ ↓ ↓ ↓ ∅<		
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 2 2 24 25 26 27 28 29 30 33 32 34 45 46 47 48 49 50 44 42 43 45 56 57 58 59 60 55 55 56 57 56 57 50 <td< th=""><th>0 3 6 9 12 15 18 21 24</th><th>3, 6, 9, 12, 15</th></td<>	0 3 6 9 12 15 18 21 24	3, 6, 9, 12, 15	
2M.3 - I can double numbers to 20 and multiples of 10	15 15 =	Double 6 is	$ \begin{array}{c} 16 \\ 10 \\ 1 \\ x_2 \\ 20 \\ 12 \end{array} $	
2M.4 - I can multiply using concrete objects, pictorial representation s arrays and repeated	Repeated grouping/repeated addition 3 × 4 4 + 4 + 4 There are 3 equal groups, with 4 in each group.	Represent this pictorially alongside a number line e.g.	$3 \times 4 = 12$ $4 + 4 + 4 = 12$ Abstract number line showing three jumps	
addition		3×4 12 12 4 12 12 1 2 3 1 2 3 12	or four. 3 × 4 = 12 0 4 8 12	

Year 2 Calculation Policy				
Learning	Division			
Ladders Assessment Statement	Concrete	Pictorial	Abstract	
2D.1 - Using fingers, I can say where a given number is in the 2s, 5s or 10s e.g. 8 is the fourth number when I count in 2s	Mar Mar Mar	$\begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 4 \\ 6 \\ 8 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10 $	How many 2s in 12? 12 shared between 2 is ? How many groups of 2 make 12? 12 ÷ 2 = ?	
2D.2 - I can halve numbers to 40 and multiples of 10 to 100	Sharing using a range of objects. 6+2	$12 \div 2 = ?$ 12 12 $5 \div 1 = 6$ $22 2 2$ $2 2 6 \times 2 = 12$ 12 $2 2 2 2 2$ $2 2 6 \times 2 = 12$ $12 \div 2 = 6$	2 X 6 =12 6 X 2= 12 So ? ÷ 2 = 20 ÷ ? = 4	
2D.3 - I can relate grouping to division e.g. How many groups of 5 in 20	$20 \div 5 =$ How many groups of 5 in 20? $4 \times 5 = 20$ $50 \div 5 = 4$ $1 2 3 4$	$20 \div 5 =$ How many groups of 5 in 20? $\frac{1}{\left[\begin{array}{c} 2 \\ 0 \end{array}\right]^{2}} \xrightarrow{2} \\ 0 \\ 5 \\ 10 \end{array} \xrightarrow{4} \\ 15 \\ 20 \end{array}$	20 ÷ 5 or how many 5s make 20?	
2D.4 - Find 1/2, 1/3, 1/4 and 3/4 of a quantity of objects and of amounts (whole number answers)	$\frac{1}{3}$ of $12 = 4$	$\frac{1}{4} \text{ of } 16 = 4$ $16 \text{ one of } 4 \text{ equal groups.}$ $\frac{3}{4} \text{ of } 20 = 15$ $100 \text{ (i)} \text{ (i)} \text{ (i)}$ $3 \text{ of } 4 \text{ equal groups = 15}$	$\frac{1}{2} \text{ of } 12 = 12 \div 2$ = 6 $\frac{1}{4} \text{ of } 12 = 12 \div 4$ = 3 $\frac{1}{3} \text{ of } 12 = 12 \div 3 = 4$ $\frac{3}{4} \text{ of } 20 = (20 \div 4) \times 3 = 15$	