Addition				
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract	
5A.1 - I know number bonds to 1 and the next whole number	+0.3	+0.08 +0.5	+0.6 0.399 0.4 0.399 + 0.601	
	0.7	0.42	0.399	
EA 2 Loop odd	0.7 + = 1	0.42 + 0.58 = 1	0.399 + 0.601 = 1	
to the next 10 from a decimal number (e.g. 13.6+6.4=20)		$13.8 + \_ = 20$ $13.6 + 6.4 = 20$ $+6 + 6.4 = 20$ $13.6 + 6.4 = 20$ $13.6 + 6.4 = 20$	13.6 + 6 + 0.4 = 20	
5A.3 - I can add decimals which are near multiples of 1 or 10 including money (e.g. 6.34+1.99)	£6.34 + £1.99	6.34 + 1.99 = +2 $6.34 + 1.99 = -8.33$ $6.34 + 2.83$	6.34 + 1.99 = 6.34 + 2 - 0.01 = 8.33 £6.34 + £2 - 1p	
	E 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
5A.4 - I can add a mix of whole numbers and decimals with different numbers of decimal places using column addition	20.00		$2.4 + 3.74 =  2.4 0  + 3.7 4  6 \cdot 1 4$	

Subtraction				
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract	
5S.1 - I can takeaway numbers which are near multiples of 1 or 10, including money (e.g. 6.34 - 1.99)		$\begin{array}{r} 6.34 - 3.99 = \\ \begin{array}{r} +0.01 \\ 2.34 \end{array} \\ \hline 2.35 \\ \hline -4 \end{array} \\ \hline 6.34 \\ \hline \end{array}$	6.34 – 3.99 = 6.34 – 4 + 0.01 = 2.35	
5S.3 - I can efficient written subtraction with upto 5 digits using efficient column subtraction			$\frac{\frac{3}{4}}{-\frac{2}{5}}\frac{\frac{3}{2}}{-\frac{2}{5}}\frac{\frac{3}{5}}{-\frac{3}{1}}\frac{7}{9}$	
5S.4 - I can use efficient written subtraction with a mix of whole numbers and decimals with different numbers of decimal places using column subtraction	Thousands         Units         1/10         1/100           Hadreiti         Tess         Ones         Hudruiti         Tess         Ones         Testha         Hadreitia           Image: State of the st		- <u>1.56</u> 0.94	

Multiplication				
Learning		• •		
Assessment	Concrete	Pictorial	Abstract	
Statement				
5M.6 - I can use short	Formal colum method with place value counters	Children represent the counters/base 10:	1 2 3	
multiply a 1-digit	6 X 23	100s 10s 1s	× 6 8	
number with upto 4 digits and money	100s 10s 1s			
		2 000000	$\frac{x}{4}$	
	100s 10s 1s	$4 \times 132 = 528$ 100s 10s 1s 100 (10 (0 (c) (1 (1))) 10 (c) (1 (1))) 10 (c) (c) (1 (1))) 10 (c)	1 20 (30×4) 8 (2×4) 528	
	$4 \times 132 =$ 100s 10s 1s $0 \times 10 \times 10$ $0 \times 10 \times 100$ $0 \times 100 \times 100 \times 100 \times 100$ $0 \times 100 \times 100 \times 100 \times 100 \times 100 \times 100 \times 1000 \times 10000 \times 1000 \times 10000 \times 100000 \times 10000 \times 100000 \times 100000000$	2 8	132 × 4 <u>528</u>	
5M.7 - I can use the 'ladder' method to multiply 3 and 4 digit numbers by a teen number (long multiplication)			5 6 <u>X 2 7</u> 1 0 0 0 (50 X 20) 1 2 0 (6 X 20) 3 5 0 (50 X 7) <u>4 2</u> (6 X 7) 1 5 1 2	

Division				
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract	
5D.1 - I can divide whole numbers by 10, 100, 1000, 10000 to give whole number answers or answers with 1, 2 or 3 decimal places		$24 \div 100 = 0.24$ 10 1 10 100 10 1 10 100 10 100 100	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
5D.2 - I can halve amounts of money e.g. half of £52.40 is £26.20	20 THE CONTRACT OF THE CONTRACT.	$\frac{1}{20}$ $\pm 52.40 = \pm 26.20$ 52.40 1 25 1 0.2	½ of £52.40 = (½ of £52) + (1/2 of 0.20) = £26 + £0.20 = £26.20	
5D.3 - I can divide by larger numbers mentally by subtracting the 10th or 100th multiple as appropriate		$258 \div 6 = 43$ -3x6 = 18 $-40 \times 6 = 240$	$258 \div 6 = 43$ - x6 = 258 40x6 = 240- - - - - - - - - - - - - - - - - - -	
D.4 - I can begin to represent a remainder as a fraction or decimal			$47:3 = 15 r 2 \text{ or } 15^{2}/3$ -x3 = 47 10 x 3 = <u>30</u> - 5 x 3 = <u>17</u> <u>2</u>	
5D.5 - I can use short division to divide a number with up to 4 digits by 12 or less.			1264 $6\overline{)7}^{1}5^{3}8^{2}4$	

Addition				
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract	
6.1 - I can work out quickly number bonds to 1000		$548 \pm 452 = 1000$ $\frac{+2}{548} \pm 50  600  1000$ $\boxed{1000}$ $\boxed{1000}$ $\boxed{548}  452$ $548  \pm 452 = 1000$	1000 548 452 548 +452= 1000	
6A.2 - I can use number bonds to 100 to work out related facts (e.g. 3.46+0.54)	36 + 64 = 100         100         100         100         100         100	(100) (46) (54) 3.46 + 0.54 = 4	46 + 54 = 100 0.46 + 0.54 = 1 3.46 + 0.54 = 4 3.46 + = 4	
6A.3 - I can add positive number to negative numbers	-4 + 7 = 3	-4 + 7 = 3 -4 + 4 + 3 -4 - 4 - 3	-4 + 7 = - 4 + 4 + 3 = 3	
6A.5 - I can use column addition to add decimal numbers with up to 3 decimal places			4.52 + 3.294 = 4.520 + 3.294 <u>7.814</u>	

Subtraction				
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract	
6S.1 - I can work out number bonds to 1000 quickly		1000 - 564 = $+ 6 + 30 + 400$ $564 - 570 - 600$ $400 + 30 + 6 = 436$ $1000$	1000= 564 + ?	
6S.2 - I can use mental strategies to subtract decimal numbers	Count Look at	on, count back – subtract c orevious mental strategies t	nd adjust. aught in KS2	
6S.3 - I can use efficient written subtraction with numbers with upto 3 decimal places	Thousands         Hundreds           Hundreds         Tens         Ones         Hundreds	Units     •     1/10     1/100       Idreds     Tens     Ones     •     Tenths     Hundredths       Hundredths     Hundredths     Thousandths	$4.36 - 0.434 = 3.926$ $3\frac{1}{2}, \frac{1}{3}, \frac{5}{4}, \frac{1}{0}$ $- 0.434$ $\overline{3.926}$	

Multiplication			
Learning Ladders			
Assessment Statement	Concrete	Pictorial	Abstract
6M.2 - I can use doubling and halving to multiply by 2, 4, 8, 5, 20 and 25		$4 \times 3 = 12 \text{ so } 4 \times 0.03 = 0.12$ (1) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)	4 x 3 = 12 4 X 0.3 = 1.2 4 X 0.03 = 0.12
6M.3 - I can multiply 2 place decimals by 1 digit numbers using partitioning		$x_{2} \begin{pmatrix} 2 \times 4 = 8 \\ 4 \times 4 = 16 \end{pmatrix} x_{2}^{+2} \begin{pmatrix} 10 \times 7 = 70 \\ 5 \times 7 = 35 \end{pmatrix}^{+2} \begin{pmatrix} 2 \times 6 = 12 \\ 20 \times 6 = 120 \end{pmatrix}^{+2} \\ x_{2} \begin{pmatrix} 2 \times 3 = 6 \\ 4 \times 3 = 12 \end{pmatrix}^{+2} \begin{pmatrix} 100 \times 12 = 1200 \\ 100 \times 12 = 1200 \end{pmatrix}^{+2} \\ x_{2} \begin{pmatrix} 8 \times 3 = 24 \\ 8 \times 3 = 24 \end{pmatrix}^{+2} \begin{pmatrix} 100 \times 12 = 1200 \\ 25 \times 12 = 300 \end{pmatrix}^{+2}$	
6M.4 - I can multiply mentally by near multiples of 100 (e.g. 67x199 as (67x200)-67)		$5 \times 2.47 = 12.35$ $2  0.4  0.07$ $\times 5         $ $10  2  0.35$ $= 12.35$	5 X 2.47 = (5x2) + (5x0.4) + (5x0.07) = 12.35
6M.5 - I can use long multiplication to multiply a 2-digit number by a number with up to 4-digits		199 × 45 =(200 × 45)-45 9000 = 8955	199 x 45 = (200 x45) – 45 = 8955
6M.5 - I can use long multiplication to multiply a 2-digit number by a number with up to 4-digits			$   \begin{array}{r}     387 \\     x 14 \\     3870 \\     15^{3}4^{2}8 \\     \underline{11} \\     5418 \\   \end{array} $

Division			
Learning Ladders Assessment Statement	Concrete	Pictorial	Abstract
6D.1 - I can divide 1 and 2 place decimals by 10 and less using know facts			$2.4 \div 6 = 0.4$ $24 \div 6 = 4$
6D.2 - I can identify common factors to help with mental division e.g. 438 ÷ 6 is 219 ÷ 3 which is 73			$438 \div 6 = 219 \div 3 = 73$ $- \times 3 = 219$ $70 \times 3 = 210$ $3 \times 3 = 9$ - 0
6D.3 - I can halve decimal numbers with up to 2 decimal places using partitioning e.g. half of 36.86		2 4 14.84 = 7.42 	$\frac{1}{2} \circ f = \frac{1}{4} \cdot \frac{3}{4} = \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} = \frac{1}{4} \cdot $
			(172 01 0.04) = £7 + £042 = £7.42
6D.4 - I can use short division to divide a number with upto 4 digits by a 1-digit or 2- digit number			$\begin{array}{c} 12.325 \\ 4 49.300 \\ 12.325 \text{ to 2 d.p is } \underline{12.33} \end{array}$
6D.5 - I can use long division to divide 3-digit and 4-digit numbers by 'friendly' 2- digit numbers			$2544 \div 12 = 212$ $12 \overline{2544} + -244$