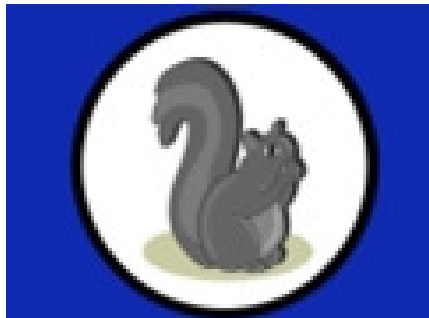


Mountfields Lodge
Year 6 Calculation Policy for
Parents
March 2016



Addition: Year 6

Missing number/digit problems:

Mental methods should continue to develop, supported by a range of models and images, including the number line. The bar model should continue to be used to help with problem solving.

Written methods

As year 5, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with columnar method to be secured.

Continue calculating with decimals, including those with different numbers of decimal places.

Use of Y4 place value counters for SEN as needed.

Problem Solving

Teachers should ensure that pupils have the opportunity to apply their knowledge in a variety of contexts and problems (exploring cross curricular links) to deepen their understanding.

Subtraction: Year 6

Missing number/digit problems: \square and $\#$ each stand for a different number. $\# = 34$. $\# + \# = \square + \square + \#$. What is the value of \square ? What if $\# = 28$? What if $\# = 21$

$$10\ 000\ 000 = 9\ 000\ 100 + \square$$

$$7 - 2 \times 3 = \square; (7 - 2) \times 3 = \square; (\square - 2) \times 3 = 15$$

Mental methods should continue to develop, supported by a range of models and images, including the number line. The bar model should continue to be used to help with problem solving.

Written methods

As year 5, progressing to larger numbers, aiming for both conceptual understanding and procedural fluency with decomposition to be secured.

Teachers may also choose to introduce children to other efficient written layouts which help develop conceptual understanding. For example use of expanded subtraction:

$$\begin{array}{r} 326 \\ -148 \\ \hline 2(150) \\ 150(300) \\ \underline{26} (326) \\ 178 \end{array}$$

Use of place value counters for LAPs if necessary

Continue calculating with decimals, including those with different numbers of decimal places.

Multiplication: Year 6

Continue with a range of equations as in Year 2 but with appropriate numbers. Also include equations with missing digits

Mental methods

Identifying common factors and multiples of given numbers

Solving practical problems where children need to scale up. Relate to known number facts.

Written methods

Continue to refine and deepen understanding of written methods including fluency for using long multiplication.

MAPs / LAPs

X	1000	300	40	2
10	10000	3000	400	20
8	8000	2400	320	16

$$\begin{array}{r} ^2 ^3 ^1 \\ 1\ 3\ 4\ 2 \\ \times 1\ 8 \\ \hline 1\ 3\ 4\ 2\ 0 \\ 1\ 0\ 7\ 3\ 6 \\ \hline 2\ 4\ 1\ 5\ 6 \\ ^1 \end{array}$$

HAPs use of polishing pen for 'carrying'

Division: Year 6

+ = signs and missing numbers

Continue using a range of equations but with appropriate numbers

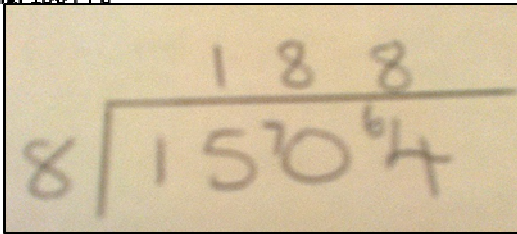
Sharing and Grouping and using a number line (SEN)

Children will continue to explore division as sharing and grouping, and to represent calculations on a number line as appropriate.

Quotients should be expressed as decimals and fractions

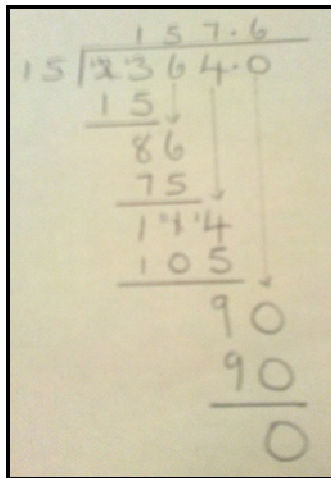
Formal Written Methods – long and short division

E.g. $1504 \div 8$



A photograph of a handwritten long division calculation for $1504 \div 8$. The divisor 8 is written on the left, and the dividend 1504 is written under a horizontal line. The quotient 188 is written above the line. The calculation shows 8 dividing 15 to get 1, 8 dividing 70 to get 8, and 8 dividing 4 to get 4.

E.g. $2364 \div 15$ (use of ready reckoner for multiples)



A photograph of a handwritten short division calculation for $2364 \div 15$. The divisor 15 is written on the left, and the dividend 2364 is written under a horizontal line. The quotient 157.6 is written above the line. The calculation shows 15 dividing 23 to get 1, 15 dividing 86 to get 5, 15 dividing 144 to get 9, and 15 dividing 105 to get 7. The remainder 90 is shown, which is then divided by 15 to get 6. The final result is 157.6.