

	Addition	Subtraction	Multiplication	Division						
Yr 3	Number Line Children will continue to use empty number lines with increasingly large numbers, including compensation where appropriate. Count on from the largest number irrespective of the order of the calculation $38 + 86 = 124$ $\begin{array}{r} 38 \\ + 86 \\ \hline 124 \end{array}$ Informal methods Children will begin to use informal paper methods (jottings) to support, record and explain partial mental methods building on existing mental strategies. Adding by partitioning $67 + 24 = 91$ $60 + 20 = 80$ $7 + 4 = 11$ $80 + 11 = 91$ Partitioning can be demonstrated using arrow cards. Formal methods Adding the ones first then the tens Expanded method only $\begin{array}{r} 67 \\ +24 \\ \hline 91 \end{array}$ Bar models for problem solving and missing number calculations	Number line Children will continue to use empty number lines with increasingly large numbers. Children will begin to use number lines to support calculations. Children will begin to use empty number lines to support calculations Counting back First counting back in tens and ones $47 - 23 = 24$ $\begin{array}{r} 47 \\ -23 \\ \hline 24 \end{array}$ Then helping children to become more efficient by subtracting the ones in one jump (by using the known fact $7 - 3 = 4$). $47 - 23 = 24$ $\begin{array}{r} 47 \\ -23 \\ \hline 24 \end{array}$ Subtracting the tens in one jump and the ones in one jump. $47 - 23 = 24$ $\begin{array}{r} 47 \\ -23 \\ \hline 24 \end{array}$ Bridging through ten can help children become more efficient $42 - 25 = 17$ $\begin{array}{r} 42 \\ -25 \\ \hline 17 \end{array}$ Children will begin to use informal pencil and paper methods (jottings). Informal methods Partitioning demonstrated using arrow cards $67 - 24 = 43$ $67 - 20 = 47$ $47 - 4 = 43$ Formal methods Expanded column method no exchange $\begin{array}{r} 67 \\ -24 \\ \hline 43 \end{array}$	Informal methods Children will continue to use: Repeated addition 4 times 6 is $6+6+6+6 = 24$ or 4 lots of 6 or 6×4 Children should use number lines or bead bars to support their understanding. $\begin{array}{r} 24 \\ 6 \\ 6 \\ 6 \\ 6 \\ \hline 24 \end{array}$ Arrays Children should be able to model a multiplication calculation using an array $9 \times 4 = 36$ Problem solving Eg. find a ribbon that is 4 times as long as the blue ribbon 9cm 20cm Using symbols for unknown numbers to complete equations using inverse operations $\square \times 5 = 20$ $3 \times \triangle = 18$ $\square \times \square = 32$ Partitioning using the grid method - TO x O $38 \times 5 = 190$ <table><tr><td>X</td><td>30</td><td>8</td></tr><tr><td>5</td><td>150</td><td>40</td></tr></table> $150 + 40 = 190$	X	30	8	5	150	40	Informal methods Ensure that the emphasis in Y3 is on grouping rather than sharing. Children will continue to use: Repeated subtraction using a number line - taking away a group at a time. Children will use an empty number line to support their calculation. $24 \div 4 = 4$ Children should also move onto calculations involving remainders. $13 \div 4 = 3 \text{ r } 1$ Using symbols to stand for unknown numbers to complete equations using inverse operations $26 \div 2 = \square$ $24 \div \triangle = 12$ $\square \div 10 = 8$
X	30	8								
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