
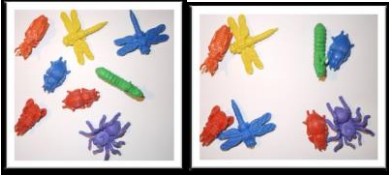


Mathematical Glossary of Terms

Partition	<p>To split a number into smaller components</p> <p>E.g. $235 = 200 + 30 + 5$</p> <p>Or $7 = 5 + 2 = 4 + 3$ and so on</p>																
Number sentence	<p>Written horizontal calculation</p> <p>E.g. $45 + 34 = 45 + 30 = 75 + 4 = 79$</p> <p>Or $56 + 23 = 79$</p> <p>I won 5 marbles and then I won 3 more. I have 8 marbles</p>																
Empty number line	<p>A hand drawn line used to assist with a mental calculation.</p> <p>E.g.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 0 10px;">$+10$</td> <td style="text-align: center; padding: 0 10px;">$+10$</td> <td style="text-align: center; padding: 0 10px;">$+10$</td> <td style="text-align: center; padding: 0 10px;">$+10$</td> <td style="text-align: center; padding: 0 10px;">$+4$</td> </tr> <tr style="border-top: 1px solid black; border-bottom: 1px solid black;"> <td style="text-align: center; padding: 0 10px;">26</td> <td style="text-align: center; padding: 0 10px;">36</td> <td style="text-align: center; padding: 0 10px;">46</td> <td style="text-align: center; padding: 0 10px;">56</td> <td style="text-align: center; padding: 0 10px;">66 70</td> </tr> </table>	$+10$	$+10$	$+10$	$+10$	$+4$	26	36	46	56	66 70						
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26	36	46	56	66 70													
Jottings	<p>Any method of recording numbers / strategies that is not formalised. E.g. use of empty number lines, number sentences.</p>																
Vertical standard method	<p>Any written method set out in a vertical format.</p> <p>E.g.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">46</td> <td style="padding-right: 20px;"></td> <td style="text-align: right;">376</td> </tr> <tr> <td style="padding-right: 20px;">$+27$</td> <td style="padding-right: 20px;">leading to</td> <td style="text-align: right;">148</td> </tr> <tr> <td style="padding-right: 20px;">$6+7 = 13$</td> <td></td> <td style="text-align: right;">524</td> </tr> <tr> <td style="padding-right: 20px;">$40+20 = 60$</td> <td></td> <td style="text-align: right;">11</td> </tr> <tr> <td style="padding-right: 20px;">73</td> <td></td> <td></td> </tr> </table>	46		376	$+27$	leading to	148	$6+7 = 13$		524	$40+20 = 60$		11	73			
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Expanded Method	<p>A written method that acts as a 'stepping stone' between a mental method with jottings and a standard written method.</p> <p>E.g.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">274</td> <td style="padding-right: 20px;">200</td> <td style="padding-right: 20px;">70</td> <td style="padding-right: 20px;">4</td> </tr> <tr> <td style="padding-right: 20px;">$+123$</td> <td style="padding-right: 20px;">100</td> <td style="padding-right: 20px;">20</td> <td style="padding-right: 20px;">3</td> </tr> <tr style="border-top: 1px solid black; border-bottom: 1px solid black;"> <td></td> <td style="padding-right: 20px;">300</td> <td style="padding-right: 20px;">90</td> <td style="padding-right: 20px;">7</td> </tr> </table>	274	200	70	4	$+123$	100	20	3		300	90	7				
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Grid Method	<p>Informal multiplication written method involving the partitioning of numbers within a grid structure.</p> <p>E.g. 34×27</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tr> <td style="border: 1px solid black; padding: 5px;">\times</td> <td style="border: 1px solid black; padding: 5px;">20</td> <td style="border: 1px solid black; padding: 5px;">7</td> <td style="border: 1px solid black; padding: 5px;"></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">30</td> <td style="border: 1px solid black; padding: 5px;">600</td> <td style="border: 1px solid black; padding: 5px;">210=</td> <td style="border: 1px solid black; padding: 5px;">810</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">4</td> <td style="border: 1px solid black; padding: 5px;">80</td> <td style="border: 1px solid black; padding: 5px;">28=</td> <td style="border: 1px solid black; padding: 5px;">108 +</td> </tr> <tr style="border-top: 1px solid black; border-bottom: 1px solid black;"> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;"></td> <td style="border: 1px solid black; padding: 5px;">918</td> </tr> </table>	\times	20	7		30	600	210=	810	4	80	28=	108 +				918
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Sharing	<p>A form of division where a number is shared equally into sets.</p> <p>E.g. There are 12 cub scouts and 3 tents. How many cubs will there be in each tent?</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>$12 \div 3 = 4$</p>																

Mathematical Glossary of Terms

Grouping	<p>A form of division where a number is split into a number of groups E.g. I put eight minibeasts into groups of 2. How many groups will there be?</p> <div style="text-align: center; margin: 10px 0;">  </div> <p style="text-align: center;">$8 \div 2 = 4$</p>		
Short multiplication	<p>24×6 becomes</p> $\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \hline \end{array}$ <p>Answer: 144</p>	<p>342×7 becomes</p> $\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ \hline \end{array}$ <p>Answer: 2394</p>	<p>2741×6 becomes</p> $\begin{array}{r} 2741 \\ \times 6 \\ \hline 16446 \\ \hline \end{array}$ <p>Answer: 16446</p>
<i>This formal written method is used when multiplying a number by a single digit number.</i>			
Long multiplication	<p>24×16 becomes</p> $\begin{array}{r} 24 \\ \times 16 \\ \hline 144 \\ 240 \\ \hline 384 \\ \hline \end{array}$ <p>Answer: 384</p>	<p>124×26 becomes</p> $\begin{array}{r} 124 \\ \times 26 \\ \hline 744 \\ 2480 \\ \hline 3224 \\ \hline \end{array}$ <p>Answer: 3224</p>	<p>124×26 becomes</p> $\begin{array}{r} 124 \\ \times 26 \\ \hline 744 \\ 2480 \\ \hline 3224 \\ \hline \end{array}$ <p>Answer: 3224</p>
<i>This formal written method is used when multiplying 2 digit numbers and beyond.</i>			
Short division	<p>$98 \div 7$ becomes</p> $\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{7} \\ 28 \\ \underline{28} \\ 0 \end{array}$ <p>Answer: 14</p>	<p>$432 \div 5$ becomes</p> $\begin{array}{r} 86 \text{ r}2 \\ 5 \overline{) 432} \\ \underline{40} \\ 32 \\ \underline{30} \\ 2 \end{array}$ <p>Answer: 86 remainder 2</p>	<p>$496 \div 11$ becomes</p> $\begin{array}{r} 45 \text{ r}1 \\ 11 \overline{) 496} \\ \underline{44} \\ 56 \\ \underline{55} \\ 1 \end{array}$ <p>Answer: $45 \frac{1}{11}$</p>
<i>Children will use this method for dividing by single digit numbers and , where appropriate, children will use this for 2 digit numbers.</i>			
Long division	<p>$432 \div 15$ becomes</p> $\begin{array}{r} 28 \text{ r}12 \\ 15 \overline{) 432} \\ \underline{30} \\ 132 \\ \underline{120} \\ 12 \end{array}$ <p>Answer: 28 remainder 12</p>	<p>$432 \div 15$ becomes</p> $\begin{array}{r} 28 \\ 15 \overline{) 432} \\ \underline{30} \quad 15 \times 20 \\ \underline{132} \quad 15 \times 8 \\ \underline{120} \\ 12 \end{array}$ <p style="text-align: center;">$\frac{12}{15} = \frac{4}{5}$</p> <p>Answer: $28 \frac{4}{5}$</p>	<p>$432 \div 15$ becomes</p> $\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{30} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$ <p>Answer: 28.8</p>
<i>The long Division method will follow, however, the numbers involved in a division calculation will often determine the method used.</i>			