

## Subtraction

Year 5	Year 6
<p><b><u>Mental Strategies</u></b>                      Children should continue to count regularly, on and back, now including steps of powers of 10.                      The number line should continue to be used as an important image to support thinking, and the use of informal jottings should be encouraged where appropriate.                      Children should continue to partition numbers in different ways.</p> <p>They should be encouraged to choose from a range of strategies:</p> <ul style="list-style-type: none"> <li>• Counting forwards and backwards in tenths and hundredths: <math>1.7 + 0.55</math></li> <li>• Reordering: <math>4.7 + 5.6 - 0.7</math>, <math>4.7 - 0.7 + 5.6 = 4 + 5.6</math></li> <li>• Partitioning: counting on or back - <math>540 + 280</math>, <math>540 + 200 + 80</math></li> <li>• Partitioning: bridging through multiples of 10:</li> <li>• Partitioning: compensating: <math>5.7 + 3.9</math>, <math>5.7 + 4.0 - 0.1</math></li> <li>• Partitioning: using 'near' double: <math>2.5 + 2.6</math> is double 2.5 and add 0.1 or double 2.6 and subtract 0.1</li> <li>• Partitioning: bridging through 60 to calculate a time interval: It is 11.45. How many hours and minutes is it to 15.20?</li> <li>• Using known facts and place value to find related facts.</li> </ul> <p><b><u>Vocabulary</u></b>                      tens of thousands boundary,                      Also see previous years</p> <p><b><u>Generalisation</u></b>                      Sometimes, always or never true? The difference between a number and its reverse will be a multiple of 9.                      What do you notice about the differences between consecutive square numbers?  <a href="#">Investigate <math>a - b = (a-1) - (b-1)</math> represented visually.</a></p> <p><b><u>Some Key Questions</u></b>                      What do you notice?                      What's the same? What's different?                      Can you convince me?                      How do you know?</p>	<p><b><u>Mental Strategies</u></b>                      Consolidate previous years.</p> <p>Children should experiment with order of operations, investigating the effect of positioning the brackets in different places, e.g. <math>20 - 5 \times 3 = 5</math>; <math>(20 - 5) \times 3 = 45</math></p> <p><b><u>Vocabulary</u></b>                      See previous years</p> <p><b><u>Generalisations</u></b>                      Order of operations: brackets first, then multiplication and division (left to right) before addition and subtraction (left to right). Children could learn an acrostic such as PEMDAS, or could be encouraged to design their own ways of remembering.                      Sometimes, always or never true? Subtracting numbers makes them smaller.</p> <p><b><u>Some Key Questions</u></b>                      What do you notice?                      What's the same? What's different?                      Can you convince me?                      How do you know?</p>