

Problem solving is a really important part of maths, but, sometimes, questions can be tricky and you might find you are stuck . Being stuck is a good thing, it means you are facing a challenge, and you will make progress because of this challenge. It is important to have strategies to help you when you do get stuck, these are 7 strategies that we will be using during the year.

Act it Out	Trial and Error	Trial by Improvement	Looking for Patterns
<p>A great way to start solving problems is to act out, make or draw what the problem shows.</p> <p>Physically acting out the situation presented in a maths problem or creating a representation helps you to better understand what the problem is asking.</p> 	<p>Solve a problem by guessing the answer and then checking that the guess fits the conditions of the problem.</p> <p>If it doesn't work, have a look at what you could change for your next guess.</p> <p>Keep guessing and adjusting your thinking until you work it out.</p> 	<p>This builds on Trial and Error.</p> <p>Solve a problem by removing improbable answers until the correct answer remains.</p> <p>Make an estimate, get a solution. Is it correct? Why not? How can we change our estimate to improve it?</p> <p>Work systematically.</p> 	<p>Many problems can be solved by identifying a repeating pattern in shapes or numbers and using that to predict what may happen in other situations.</p> <p>Solve a problem by looking for these patterns, repetitions or sequences in the data.</p> 

Simplify	Working Backwards	List or Table
<p>Sometimes problems can be quite intimidating, by making it simpler it becomes more accessible.</p> <p>When a problem is too complex to be solved in one step, it often helps to split it into simpler problems. Then, these can be solved separately.</p> 	<p>Starting with the end in mind helps you develop a strategy that leads to the solution by going backwards through the process.</p> <p>Start at the end and work back using reasoning and inverse operations.</p> <p>The inverse operation pairs are:  + and -  e.g. <math>10+2=12</math> so <math>12-2=10</math></p> <p>X and ÷  e.g. <math>4 \times 8 = 32</math> so <math>32 \div 8 = 4</math></p> 	<p>Solve a problem by writing the information in a more organised way to discover relationships and patterns among the data.</p> <p>Many problems can be tackled by making a list of potential solutions. You can also, turn your list into organised tables to help you solve trickier problems with lots of data involved.</p> 