

<p>Reasoning</p> <ul style="list-style-type: none"> • <i>conjecturing and hypothesising</i> • <i>recognising patterns</i> • <i>predicting, e.g. from patterns</i> • <i>generalising</i> • <i>testing</i> • <i>explaining</i> • <i>justifying</i> • <i>reasoning logically</i> • <i>deducing</i> • <i>proving</i> • <i>disproving, e.g. finding counter-examples</i>

<p>Communicating</p> <ul style="list-style-type: none"> • <i>discussing ideas and approaches</i> • <i>reading and interpreting information</i> • <i>writing and recording information:</i> <ul style="list-style-type: none"> – <i>using words</i> – <i>using numbers and/or symbols</i> – <i>in diagrams</i> – <i>in lists and tables</i> – <i>in graphs and charts</i> • <i>presenting methods, explanations, arguments and solutions</i>

<p>Problem solving</p> <ul style="list-style-type: none"> • <i>identifying and gathering information or data needed</i> • <i>ordering, sorting or classifying</i> • <i>choosing and using appropriate mathematics and resources</i> • <i>making connections between aspects of mathematics</i> • <i>deciding on suitable problem-solving strategies, e.g.</i> <ul style="list-style-type: none"> – <i>breaking a problem into parts</i> – <i>trying particular cases</i> – <i>working systematically</i> – <i>controlling variables</i> – <i>working backwards</i> • <i>estimating</i> • <i>eliminating repetitions in results</i> • <i>checking, and ensuring solutions are reasonable in the context of the problem</i>
