## Term One

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Podcast sections</th>
<th>Assessment tasks</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Jan 30</td>
<td><strong>Linear functions</strong></td>
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<td></td>
<td></td>
<td>Headstart: Rearrangement &amp; substitution, Gradient Equations of the form ( y = mx + c )</td>
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<tr>
<td>2</td>
<td>Feb 4</td>
<td>Review of headstart work Sketching linear graphs using intercepts</td>
<td>Page 5 (3:14)</td>
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<tr>
<td>3</td>
<td>Feb 11</td>
<td>Simultaneous equations Perpendicular lines Finding the equation of a straight line</td>
<td>Pages 7-9 (7:31) Pages 10 (11:13) Page 6 (5:00)</td>
<td>Homework sheet</td>
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<tr>
<td>4</td>
<td>Feb 18</td>
<td>Distance between two points Midpoint of a segment</td>
<td>Page 11 (12:20) Page 12 (13:31)</td>
<td>Linear functions test</td>
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<td><strong>Quadratic functions</strong></td>
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<tr>
<td>5</td>
<td>Feb 25</td>
<td>Expanding quadratic expressions Factorising quadratic expressions Factorising by completing the square</td>
<td>Page 2 (0:29) Page 3 (4:06) Page 5 (10:14) + extra video</td>
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<tr>
<td>6</td>
<td>Mar 4</td>
<td>Solving quadratic equations The quadratic formula, the discriminant Quadratic graphs - turning point form</td>
<td>Page 6 (12:20) Pages 7-9 (14:59) Pages 13-14 (22:05)</td>
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<tr>
<td>7</td>
<td>Mar 11</td>
<td>Quadratic graphs - intercepts method Using graphs to solve quadratic equations</td>
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<td>Problem solving Quadratic functions test</td>
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<td><strong>Cubic functions</strong></td>
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<td>8</td>
<td>Mar 18</td>
<td>Expanding Long division of polynomials Polynomial values</td>
<td>Page 2 (0:29) Page 3 (3:37) + extra video</td>
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<td>9</td>
<td>Mar 25</td>
<td>The remainder &amp; factor theorems Factorising cubic polynomials Cubic equations Cubic graphs — intercepts method</td>
<td>Page 4 (7:57) Pages 5-6 (9:50)</td>
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*Apr 2*  Holidays

*Apr 9*  Holidays
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Podcast sections</th>
<th>Assessment tasks</th>
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<tbody>
<tr>
<td>1</td>
<td>Apr 15</td>
<td>Quartic graphs — intercepts method</td>
<td>+ extra video on using CAS calc.</td>
<td>Problem solving due in Cubic functions test</td>
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<td>Cubic graphs — using translation</td>
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<td>2</td>
<td>Apr 22</td>
<td>Index laws</td>
<td>Page 2 (0:28)</td>
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<td>Negative &amp; rational powers</td>
<td>Pages 3–5 (3:09)</td>
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<td>Indicial equations</td>
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<td>3</td>
<td>Apr 29</td>
<td>Graphs of exponential functions</td>
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<td>Logarithms</td>
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<td>May 6</td>
<td>Solving logarithmic equations</td>
<td>Page 6 (5:52)</td>
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<td>Logarithmic graphs</td>
<td>Page 8 (10:54)</td>
<td>Exponential &amp; logarithmic functions test</td>
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<td>5</td>
<td>May 13</td>
<td>Applications of exponential &amp; logarithmic functions</td>
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<td>6</td>
<td>May 20</td>
<td>Set notation</td>
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<td>Relations &amp; graphs</td>
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<td>Domain &amp; range</td>
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<td>7</td>
<td>May 27</td>
<td>Types of relations (including functions)</td>
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<td>Functions &amp; relations test</td>
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<td>Inverse relations &amp; functions</td>
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<td>8</td>
<td>Jun 4</td>
<td>Exam preparation</td>
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<td>9</td>
<td>Jun 11</td>
<td>Exam week</td>
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Linear functions
• Linear functions podcast

Quadratic functions
• Quadratic functions podcast
• Equation grapher (http://phet.colorado.edu/en/simulation/equation-grapher)

Cubic functions
• Cubic functions podcast

Exponential & logarithmic functions
• Exponential functions podcast
• Logarithms podcast