## Maths - Booster Sessions Grade 5 to 9 Index

|  |  | Session to include a selection from the list below. Resources for all will be available. |
| :---: | :---: | :---: |
|  |  | - Expand the products of more than two binomials <br> - Interpret the reverse process as the 'inverse function'; interpret the succession of two functions as a 'composite function' (using formal function notation) <br> - Deduce turning points by completing the square <br> - Calculate or estimate gradients of graphs and areas under graphs, and interpret <br> results in real-life cases (not including calculus) <br> - Simple geometric progressions including surds, and other sequences <br> - Deduce expressions to calculate the nth term of quadratic sequences <br> - Calculate and interpret conditional probabilities through Venn diagrams |


|  |  | Qu | Grade | Description |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 5/6 | Compound interest |
|  |  | 2 | 5/6 | Solve quadratic equation by factorising |
|  |  | 3 | 5/6 | Indices |
|  |  | 4 | 6 | Linear simultaneous equations |
|  |  | 5 | 6 | Trigonometry - sine ratio |
|  |  | 6 | 7/8 | Surds |
|  |  | 7 | 7/8 | Stratified sample |
|  |  | 8 | 7/8 | Sine rule - find a side |
|  |  | 9 | 8/9 | Simultaneous equations - quadratic and linear |


|  |  | Qu | Grade | Description |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 6 | Trigonometry - sine ratio |
|  |  | 2 | 7/8 | Sine rule - find angle |
|  |  | 3 | 7/8 | Quadratic formula |
|  |  | 4 | 6 | Linear simultaneous equations |
|  |  | 5 | 7/8 | Surds |
|  |  | 6 | 7/8 | Proportional change |
|  |  | 7 | 7/8 | Sketch $y=\sin x$ |
|  |  | 8 | 7/8 | Solve fractional linear equation |
|  |  | 9 | 7/8 | Volume of a sphere |


|  |  | Qu | Grade | Description |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 5/6 | Pythagoras theorem - find hypotenuse |
|  |  | 2 | 6 | Trigonometry - tangent ratio |
|  |  | 3 | 7/8 | Cosine rule - find side |
|  |  | 4 | 6 | Compound interest |
|  |  | 5 | 8/9 | Simultaneous equations - quadratic and linear |
|  |  | 6 | 8/9 | Simultaneous equations - quadratic and linear |
|  |  | 7 | 6 | Complete the square |
|  |  | 8 | 6 | Sketch $\mathrm{y}=\mathrm{x}^{3}$ |
|  |  | 9 | 7/8 | Sketch $\mathrm{y}=\cos \mathrm{x}$ |

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|  |  | Qu | Grade | Description |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 5/6 | Pythagoras theorem - find adjacent |
|  |  | 2 | 6 | Trigonometry - tangent ratio |
|  |  | 3 | 7/8 | Cosine rule - find angle |
|  |  | 4 | 7/8 | Equation of a straight line through two points |
|  |  | 5 | 6 | Volume of cylinder - find the height |
|  |  | 6 | 6 | Difference of two squares |
|  |  | 7 | 6 | Function table |
|  |  | 8 | 6 | Sketch the curve $\mathrm{y}=1 / \mathrm{x}$ |
|  |  | 9 | 7/8 | Sketch the curve $\mathrm{y}=\tan \mathrm{x}$ |


|  |  | Qu | Grade | Description |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 6 | Factorise quadratic expression |
|  |  | 2 | 6 | Trigonometry - sine ratio |
|  |  | 3 | 6 | Area of non right angled triangle |
|  |  | 4 | 6 | Linear simultaneous equations |
|  |  | 5 | 8/9 | Simultaneous equations - quadratic and linear |
|  |  | 6 | 7/8 | Surds |
|  |  | 7 | 6 | Proportional change |
|  |  | 8 | 7/8 | Volume of cone - answer as a multiple of $\pi$ |
|  |  | 9 | 7/8 | Volume of sphere - answer as a multiple of $\pi$ |

