Maths Higher

Year 10

WED 1 FEB 2023

Home Learning

Visit the Corbett Maths website: https://corbettmaths.com/contents/

Find the link to the topic you are studying. Watch the video then complete the practice questions and textbook exercise. Once you have finished, check your answers here: https://corbettmaths.com/2015/03/13/worksheet-answers/

Topic	Link on Corbett Maths
Algebra - Quadratic Equations • Draw graphs of quadratics such as y = x2 + 2x + 1 • Use a graph to estimate x – and y – values, giving answers to an appropriate degree of accuracy • Draw graphs of harder quadratics such y = 2x2 – 7x + 5 • Factorise and expression such as x2 – 5x + 14 or x2 - 9 • Solve an equation such as x2 – 5x + 14 = 0 • Factorise an expression such as 3x2 + 7x + 2 or 3x2 – 27 • Solve problems using equations that factorise such as 3x2 + 7x + 2 = 0, including those that require rearrangement • Solve problems using equations such as 2x2 – 6x + 1 = 0 by using the quadratic formula • Find approximate solutions to equations such as x2 + 3x + 2 = 5 by graphical methods • Recognise the difference of 2 squares and factorise expressions in this form. • Solve problems using equations such as3/(x-2)+ 4/(x-1)=2 • identify and interpret roots, intercepts and turning points of quadratic functions graphically; deduce roots algebraically {**and turning points by completing the square**}	**Algebra - Quadratic Equations** Factorising https://corbettmaths.com/wp-content/uploads/2013/02/solving-quadratics-by-factorising-1-pdf.pdf Drawing https://corbettmaths.com/wp-content/uploads/2019/06/Drawing-Quadratics.pdf Sketching https://corbettmaths.com/wp-content/uploads/2019/04/Sketching-Quadratics.pdf Completing the square https://corbettmaths.com/wp-content/uploads/2013/02/solving-using-completing-the-square-pdf.pdf Solving graphically https://corbettmaths.com/wp-content/uploads/2019/01/Solving-Quadratics-Graphically-pdf-1.pdf
Algebra - Simultaneous Equations • Solve a pair of simultaneous equations such as x + 3y = 9 and 3x – 2y = 5 • Solve a pair of linear equations graphically; identifying the point of intersection as the solution • Solve a pair of simultaneous equations such as y = 4x + 5 and y = x2 • Find the points of intersection of a linear and a quadratic equation; recognising that the solution could be found from the points of intersection of the graphs	**Algebra - Simultaneous Equations** **https://corbettmaths.com/wp-content/uploads/2019/04/Simultaneous-Equations.pdf** **https://corbettmaths.com/wp-content/uploads/2013/02/simultaneous-equations-pdf.pdf** **https://corbettmaths.com/wp-content/uploads/2019/07/Graphical-Simultaneous-pdf.pdf** **https://corbettmaths.com/wp-content/uploads/2013/02/advanced-simultaneous-equations-pdf.pdf**
Ratio, Proportion and rates of change – Similarity • Compare the area of an enlarged shape with the original area • Find the ratio of the corresponding lengths in similar shapes and identify this as the SF of enlargement • Use ratios in similar shapes to find missing lengths • Compare lengths, areas and volumes using ratio notation and/or scale factors; make links to similarity (including trigonometric ratios) • Compare lengths, areas and volumes of enlarged shapes • Use the effect of enlargement on perimeter, area and volume in calculations	**Ratio, Proportion and rates of change – Similarity** **https://corbettmaths.com/wp-content/uploads/2019/03/Similar-Shapes-pdf.pdf** **https://corbettmaths.com/wp-content/uploads/2013/02/similar-shapes-area-volume-pdf.pdf** **https://corbettmaths.com/wp-content/uploads/2013/02/similar-shapes-pdf.pdf**
Statistics - Scatter graphs • Consider outliers when calculating the range of a distribution • Draw a scatter graph by plotting points on a graph • Draw a line of best fit on the scatter graph • Interpret the scatter graph & interpret the line of best fit • Identify the type and strength of the correlation Know that correlation does not imply causation	**Statistics - Scatter graphs** **https://corbettmaths.com/wp-content/uploads/2019/01/Scatter-Graphs-1.pdf** **https://corbettmaths.com/wp-content/uploads/2013/02/scatter-graphs-pdf2.pdf**

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