

YEAR 9 CURRICULUM INFORMATION - SUBJECT

	Summer 1	Summer 2
What will students be learning?	Pythagoras theorem Solve equations with squares and square roots Use Pythagoras theorem to find missing sides in triangles Use Pythagoras to find the length between 2 coordinates Use Pythagoras theorem in 3D shapes Non-linear graphs Substitute into quadratic expressions Draw quadratics Interpret quadratics Interpret reciprocal and exponential graphs Draw cubic graphs Interpret cubic graphs Probability Identify sets and their union, intersection and complement Calculate probability of a single event Relative frequency Independent events Probabilities from Venn diagrams	Transformations Enlargement Rotation Translation Reflection End of year assessment and revision
How will students be assessed?	2 checkpoint assessments on selected topics.	Trust BASE assessment in June. (2 different tiers)
Literacy – What keywords will be taught?	Pythagoras, square, root, area, hypotenuse, right angle, axes Quadratic, coefficient, root, intercept, solution, cubic, reciprocal, asymptote, maximum, minimum, turning point, union, intersection, complement, relative frequency, independent, mutually exclusive	Enlarge, scale factor, centre of enlargement, rotation, clockwise, anticlockwise, degree, translate, vector, horizontal, vertical, reflect, mirror line
What employability skills are being developed?	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians - Systems analysts - Actuaries	The specific value of maths as a required or preferred subject for particular careers e.g. - Engineers and engineering technicians - Surveyors and surveying technicians - Systems analysts - Actuaries

	• Accountants • Operational researchers • Chemists • Software engineers • Statisticians Employability skills Interpreting data and justifying validity Explaining and justifying to another person Being able to approximate calculations mentally. Logical reasoning and problem-solving skills Support your opinion with historical data or trends. Use mathematics to help develop solutions to practical problems Supports productions schedules alongside budget Critical thinking Analytical thinking Communication	• Accountants • Operational researchers • Chemists • Software engineers • Statisticians Employability skills Interpreting data and justifying validity Explaining and justifying to another person Being able to approximate calculations mentally. Logical reasoning and problem-solving skills Support your opinion with historical data or trends. Use mathematics to help develop solutions to practical problems Supports productions schedules alongside budget Critical thinking Analytical thinking Communication
Wider Curriculum Links?	Art and Design and Maths Multicultural designs like rangoli patterns Ratio is used to mix paints to make secondary colours (primary colours are red, yellow and blue). English and Maths Spelling mathematical vocabulary and use in correct context/sentence. To reason or explain mathematical thinking and to justify their conclusion. Solving comprehension and extracting key information. Design and technology Reading and using scales Proportion and ratio in recipes Nutritional information	

	Geography and maths Collecting and representing data Grid references, coordinates and bearing Using scale on ordnance survey maps Computing and Maths Angles and direction using apps/programming. Information using excel Foreign language and Maths Numbers used calculations/ times tables/time Music and Maths Time and speed represented by tempo, chord progression , form and meter. Equivalent fractions using musical notation eg a semibreve last for four crochet beats. A minim last for two crochet beats, so a minim is half a semibreve. History and Maths Historical timelines as a key aspects of maths Interpreting graphs and data Physical education and maths Times distance and speed Averages to discuss athletes performance.	
What useful websites are there for this topic?	Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps): www.mathsapps.com/ Brainbashers (games and puzzles):	Sparx maths www.sparxmaths.co.uk www.corbettmaths.co.uk www.subtangent.com/maths/index.php Nrich (games and puzzles): www.nrich.maths.org.uk/public/index.php Counton (lots of games): www.counton.org/games/ Sums (games): www.sums.co.uk/playground.htm Mathsapps (find apple maths apps): www.mathsapps.com/ Brainbashers (games and puzzles):

	www.brainbashers.com/puzzles.asp Funbrain (puzzles & games): www.funbrain.com/ Hellam (puzzles & games): www.mathematics.hellam.net/ www.mathsgenie.co.uk www.mathsbot.com	www.brainbashers.com/puzzles.asp Funbrain (puzzles & games): www.funbrain.com/ Hellam (puzzles & games): www.mathematics.hellam.net/ www.mathsgenie.co.uk www.mathsbot.com
What wider reading could be done for this topic?	KS3 Maths Revision and Practice by CGP books	KS3 Maths Revision and Practice by CGP books
What else can students be doing independently to develop their understanding of this topic?	The following workbooks and revision guides are available for you to purchase on Parentpay: • Key Stage Three Mathematics Higher Level: Complete Revision and Practice Workbook (includes answers) by CGP • Key Stage Three Mathematics Foundation Level: Complete Revision and Practice Workbook (includes answers) by CGP You can also access additional Maths resources via the school website	The following workbooks and revision guides are available for you to purchase on Parentpay: • Key Stage Three Mathematics Higher Level: Complete Revision and Practice Workbook (includes answers) by CGP • Key Stage Three Mathematics Foundation Level: Complete Revision and Practice Workbook (includes answers) by CGP You can also access additional Maths resources via the school website