

Year 9 - Programme of Study 2007/2008 - Set 3

	<ul style="list-style-type: none"> / by nos. < 1 (5.2) Metric conversions Substitution incorporating BoDMAS 		<ul style="list-style-type: none"> Standard form Error in measurement 	7 7 7	<ul style="list-style-type: none"> Reading and writing nos. in S.F. Finding upper and lower bounds Use of upper and lower bounds in calculations 		ch.5.3, 5.4
2 wks	<ul style="list-style-type: none"> Upper and lower bounds Calculate interior and exterior angles of common polygons Find x: $1.35 < x < 1.36$ Conversion between fraction, decimal and % 		<ul style="list-style-type: none"> Representation of data 	4 6 7 5, 6 5	<ul style="list-style-type: none"> Scatter diagrams Line of best fit Pie charts Misleading diagrams © 		Key Maths 9 ² - ch.9 "Yes, PM" video clip
2 wks	<ul style="list-style-type: none"> Given %, find original e.g. if 20% of a number is 4, what is the number? Mental decimals (12.2) Generate 1st 4 terms of sequence given a rule, inc. powers Write numbers in standard form 		<ul style="list-style-type: none"> Pythagoras 	3 7	<ul style="list-style-type: none"> Triples Finding the hypotenuse Finding any side 		Key Maths 9 ² - ch.1
Christmas break							
2 wks	<ul style="list-style-type: none"> Make as many different answers as possible using: $3 \times 5 + 3 - 2 \times 7 + 1$ with brackets Mental decimals (12.2) Divisibility testing Finding a fraction or a % of a quantity 		<ul style="list-style-type: none"> Fractions, % and ratio 	2 5 6 6 6 6 7	<ul style="list-style-type: none"> Conversion between fraction, % and decimals Finding a fraction or % of a quantity © Recap expressing one quantity as a fraction or % of another Simplifying ratios Sharing a quantity in a given ratio The unitary method Speed, distance, time calculations 		Key Maths 9 ² - ch.7
2 wks	<ul style="list-style-type: none"> Increase and decrease 		<ul style="list-style-type: none"> Probabilty 	4 5	<ul style="list-style-type: none"> Using the 0 - 1 scale 		Key Maths 9 ² - ch.10

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	<ul style="list-style-type: none"> by a % Nth term of linear sequence Use of partitioning to x nos. e.g. $6.3 \times 7 = (6 \times 7) + (0.3 \times 7)$ Find original no. given fraction e.g. $\frac{1}{3}$ of a no. is 6, find the number 			6 5, 7 6	<ul style="list-style-type: none"> Know that probabilities always add up to 1 Relative frequency Space diagrams 	
2 wks	<ul style="list-style-type: none"> Mental decimals (12.2) -ve nos. using the 4 operations Use place value to work out the value of 1 calculation given another Angles in parallel lines 		<ul style="list-style-type: none"> Brackets and equations 	2 6 5 5 6 7	<ul style="list-style-type: none"> Collecting terms BoDMAS Multiplying out brackets and simplifying Solving equations Inequalities (not covered last year) 	<p>Key Maths 9² - ch.8</p> <p>Key Maths 9² - ch.11.2</p>
2 wks	<ul style="list-style-type: none"> Probability - finding the number of outcomes of 2 independent events Measures of average Find original, given % Find perimeter of square given area and vice - versa 		<ul style="list-style-type: none"> Analysis of data 	4 4, 5 6 5 5 5 (7)	<ul style="list-style-type: none"> Discrete and continuous data Grouping data Bar charts Average and range Median and mode <p>The worksheets here are good but time consuming. If you use them, set the data collection from the sheets as H/W. Data sheets located in maths locker.</p>	Key Maths 9 ² - ch.4
1½ wks	<ul style="list-style-type: none"> Metric conversions (HY 18) Imperial conversions Ratio Probabilty 		<ul style="list-style-type: none"> Angles Transformations 	3 6 6 6 (7)	<ul style="list-style-type: none"> Recap finding unknown angles Interior and exterior angles of a polygon Reflection, rotation, translation, enlargement, (inc. fractional scale factor) 	Key Maths 9 ² - ch.13, 16.1
2 wks	<ul style="list-style-type: none"> Time calculations 		<ul style="list-style-type: none"> Straight line graphs 	2 6	<ul style="list-style-type: none"> Drawing a straight line from the 	Key Maths 9 ² - ch.14

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	<ul style="list-style-type: none"> • Area of 2D shapes • Mental decimals (12.2) • Inc./dec. by a given % 			7	<ul style="list-style-type: none"> equation • Using the equation to interpret gradient, y-intercept • Lines not of the form $y =$ • Simultaneous equations - graphical and algebraic solutions 	
1½ wks	<ul style="list-style-type: none"> • Ratio • Averages • Finding the original, given a fraction of a quantity • Common squares, roots, cubes and cube roots 		• Loci	2	<ul style="list-style-type: none"> • Understand meaning of locus of a point • Draw simple loci using compass and ruler • Bisection of an angle • Perpendicular bisector 	Key Maths 9 ² - ch.15
<ul style="list-style-type: none"> • Easter break + following 2 weeks - past papers • Start past papers towards the end of March. We do not have enough papers to go round, so pupils must keep a record of which papers they have attempted. • Revision guides and workbooks will be offered for purchase after Christmas. All pupils should be encouraged to buy these and get started on them asap! 						

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4wks	<ul style="list-style-type: none"> Please continue with the mental starter sessions, using ideas from above 		<ul style="list-style-type: none"> GCSE Data Handling <p>The next 4 weeks will be spent covering the Data Handling component of the GCSE course, thus enabling pupils to carry out the GCSE Data Handling coursework.</p> <p>Since this area of the GCSE syllabus requires wide use of ICT facilities, it seems sensible to use the time when Year 11 are not using the computer rooms. Access would otherwise be difficult.</p>	I H	<p>Recap prior knowledge by brainstorming what pupils know about:</p> <ul style="list-style-type: none"> Data collection Presentation of data Analysis of data Interpretation of results <p>Analysis of listed data. Use list of, say, 2 sets of 30 exam %s, to illustrate:</p> <ul style="list-style-type: none"> Stem and leaf diagrams (extend to ordered, back to back) Median, LQ, UQ, IQR Box plot Analysis of skewness + consequences of skewed data Mean of data + reliability, based on above Mean from grouped data LQ, UQ and median of grouped data + box plots of this + interpretation Scatter diagrams and correlation Line of best fit thro' means Interpretation of correlation coefficient Sampling – random, stratified Which to use and why, choice of sample size 		<p>See post SAT scheme of work for further details.</p> <p>Topic based examples can be found in:</p> <ul style="list-style-type: none"> Key Maths Intermediate 1 – ch. 3, 16 Intermediate 2 – ch. 25 Maths to level 10 – ch.25, 38 Cambridge Modular Maths Data Handling Worksheets from Di
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1wk			<ul style="list-style-type: none"> Excel + GCSE coursework skills 			<p>Pupils will take part in an intensive course in Excel, run in conjunction with the ICT dept.. This will be offered as a cross-curricular course, giving pupils the skills required to use Excel for coursework across a number of subjects as well as maths.</p>		Copy of details available from Di
2 wks			<ul style="list-style-type: none"> Data Handling coursework 			<p>All pupils will be expected to make wide use of ICT for this project.</p>		See Di for this
Any time left should be spent consolidating topics from Year 9 scheme, which pupils found difficult.								

- Please use 'Resources' column to cross-reference scheme to the relevant pages in the NNS as you meet the topics.
- Please use OK? column to advise future starters and future schemes.
- In order to cover all required topics, the time allocated per topic is short. It is, however, important that we adhere to them, if we are to cover the syllabus and have time for revision.
- Extension work is available at the end of each chapter for the most able.
- There is a Question bank if you need further material during the year. This will be located in the Maths locker in the staff room. Please place any materials copied in a labelled folder in the locker, so that we don't duplicate our copying.
- End of chapter tests should be carried out and results recorded as NC levels. These are located in the Maths locker in the staff room.
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