DAARUL QUR'AN INTERNATIONAL SCHOOL
YEARLY OVERVIEW OF MATHEMATICS
GRADE 7 (SECONDARY 1/PRE-IGCSE)
ACADEMIC YEAR 2008/2009

SEMESTER 1	SEMESTER 2
Topic 1 NUMBER: PROPERTIES 1. Place value in whole numbers and decimals 2. Four rules of computation for calculation 3. Decimals, fractions and percentages, and convert between them 4. Prime number, common factors, and common multiples, square, square roots and cubes of numbers 5. Order quantities by magnitude and use symbols =, ?Ê>, <, =Ê=Ê 6. Standard form A x 10^n where nis a positive whole number and 1 =›A < 10 **Topic 2 NUMBER: PROBLEM SOLVING** 1. Calculate the percentage of a quantity and express one quantity as a percentage of another 2. Use negative numbers in context 3. Recognise the notation of ratio, use ratio and direct proportion in context	**Topic 3 NUMBER: PROBLEM SOLVING (Continuous)** 1. Approximation to specified numbers of significant figures and decimal places and give appropriate upper and lower bounds for data given to specified accuracy 2. Use an electronic calculator effectively 3. Handle number manipulation mentally and show evidence of performing calculations without the aid of a calculator **Topic 4 NUMBER: DATA HANDLING** 1. Collect and tabulate discrete and continuous data 2. Calculate the mean, median, mode and range for discrete and continuous data 3. Calculate the probability of a single event **Topic 6 ALGEBRA: MANIPULATION** 1. Use letters to represent unknowns, substitute in a formula and transform simple formulae 2. Find the solution of linear, simple simultaneous and quadratic equations using algebraic manipulation 3. Demonstrate the understanding of simple inequalities

DAARUL QUR'AN INTERNATIONAL SCHOOL
YEARLY OVERVIEW OF MATHEMATICS
GRADE 8 (SECONDARY 2/PRE-IGCSE)
ACADEMIC YEAR 2009/2010

SEMESTER 1	SEMESTER 2
Topic 7 ALGEBRA: MANIPULATION (Continuous) 1. Manipulate directed numbers, use brackets and extract common factors 2. Use and interpret positive indices **Topic 8 ALGEBRA: GRAPHS** 1. Draw and interpret the graphs of simple functions, use tables of values and find the gradient of straight line graphs 2. Draw and interpret graphs in practical situations 3. Use Cartesian co-ordinates 4. Find the solution of linear and simple simultaneous equations using graphs 5. Recognise, continue and generalise number patterns including finding expressions for the n^{th} term **Topic 9 SPACE: MEASURE** 1. Use standard units of mass, length, area, volume and capacity and also express quantities in terms of larger or smaller units 2. Calculate times in terms of the 24-hour and 12-hour clock systems 3. Calculate using money, solve problems on personal and household finance involving simple interest, discount, profit and loss	**Topic 10 SPACE: MEASURE (Continuous)** 1. Calculate average speed and other compound measures 2. Calculate the perimeter and area of triangles, quadrilaterals and circles, and the volumes derived from these shapes **Topic 11 SPACE: GEOMETRY** 1. Use and interpret the geometric terms: point, line, parallel, bearing, right angle, acute angle, use and interpret the vocabulary of triangles, quadrilaterals, circles and polygons 2. Calculate unknown angles using the properties of angles at a point, angles formed within parallel lines and angle properties of triangles and quadrilaterals 3. Construct, using appropriate equipment, simple 2D shapes and the nets of simple 3D shapes 4. Understand the concepts of reflection, rotation and symmetry in two dimensions including enlargement by a positive whole number scale factor 5. Plot the locus of an object moving according to given rules **Topic 12 SPACE: TRYGONOMETRY** 1. Use Pythagoras' Rule 2. Use trigonometric ratios within right angled triangles to solve problems