Doha British School – Wakra
Mathematics
Curriculum Road Map – KS3/4

Intent

- ❑ To be able to become fluent in the fundamentals of mathematics
- ❑ To be able to recall and apply knowledge rapidly and accurately
- ❑ To reason mathematically by being able to follow a line of enquiry, conjecturing relationships and generalisations
- ❑ To use the correct mathematical language
- ❑ To develop a mathematical proof

In Year 11...

- ❑ I will be able to calculate percentage increase or decrease, carry out calculations involving reverse percentages
- ❑ I will use language, notation and Venn diagrams to describe sets
- ❑ I will be able to apply the sin, cosine and tangent ratios for acute angles, solve trigonometric problems in two dimensions involving measures of elevation and depression
- ❑ I will be able to apply rates of change to distance- time and speed – timegraphs
- ❑ I will be able to draw tree diagrams to calculate the probability of combined events

In Year 10...

- ❑ I will be able to identify and use natural numbers, integers, prime numbers, square numbers, common factors and common multiples, rational and irrational numbers, continue to a given number sequence, recognise patterns in sequences and relationships between different sequences, generalise to single algebraic statements
- ❑ I will be able to manipulate directed numbers, expand products of algebraic expressions and factorise expressions
- ❑ I will be able to solve problems involving the arc length and sector area of an circle, the surface area and volume of a sphere, pyramid and cone
- ❑ I will be able to use Loci in two dimensions
- ❑ I will be able to construct and read bar charts, histograms, scatter diagrams and cumulative frequency diagrams
- ❑ I will be able to calculate the probability of a single event

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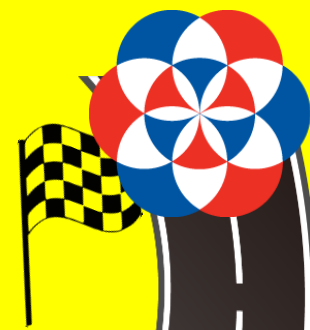
In Year 9…

- ❑ I will be able to recognise when two quantities are directly proportional; solve problems involving proportionality
- ❑ I will use index notation for positive integer powers; apply the laws of indices to simple algebraic expressions
- ❑ I will be able to construct table of values and plot the graphs of linear functions
- ❑ I will be able to use coordinate grid to solve problems involving translations, rotations, reflections and enlargements
- ❑ I will know that the sum of probabilities of all mutually exclusive outcomes is 1 and use this fact to solve probability problems

In Year 8…

- ❑ I will be able to add and subtract fractions and mixed numbers
- ❑ I will be able to construct and solve simple linear equations
- ❑ I will be able to find the mid-point of a line segment AB, given the coordinates of points A and B
- ❑ I will be able to draw and interpret pie-charts and frequency diagrams
- ❑ I will know that if the probability of an event occurring is p, then the probability of it not occurring is 1-p

In Year 7…

- ❑ I will be able to add and subtract positive and negative numbers
- ❑ I will be able to use a ruler, set square and protractor to measure and draw acute, obtuse and reflex angles
- ❑ I will be able to read scales on a range of digital and non-non digital equipment
- ❑ I will be calculate the mean, median and mode
- ❑ I will be able use the language of probability to describe and interpret results involving likelihood and chance