

# Curriculum change for Maths

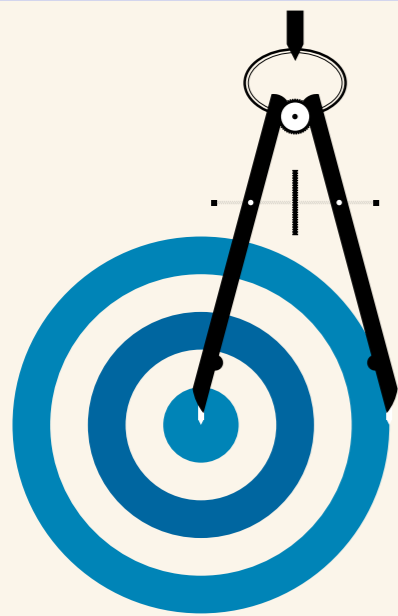
An overview of what's moved where

## Current A Level



### GCSE (9-1) Higher tier

- Expand the products of more than two binomials
- Interpret the reverse process as the 'inverse function'; interpret the succession of two functions as a 'composite function' (using formal function notation)
- Deduce turning points by completing the square
- Calculate or estimate gradients of graphs and areas under graphs, and interpret results in real-life cases (not including calculus)
- Simple geometric progressions including surds, and other sequences
- Deduce expressions to calculate the  $n$ th term of quadratic sequences
- Calculate and interpret conditional probabilities through Venn diagrams



## Current GCSE Higher



### GCSE (9-1) Foundation tier

- Index laws: zero and negative powers (numeric and algebraic)
- Standard form
- Compound interest and reverse percentages
- Direct and indirect proportion (numeric and algebraic)
- Expand the product of two linear expressions
- Factorise quadratic expressions in the form  $x^2 + bx + c$
- Solve linear/linear simultaneous equations
- Solve quadratic equations by factorisation
- Plot cubic and reciprocal graphs, recognise quadratic and cubic graphs
- Trigonometric ratios in 2D right-angled triangles
- Fractional scale enlargements in transformations
- Lengths of arcs and areas of sectors of circles
- Mensuration problems
- Vectors (except geometric problems/proofs)
- Density
- Tree diagrams

## Current GCSE Foundation



### New KS3

- Distinguish between exact representations of roots and their decimal approximations
- Interpret and compare numbers in standard form  $A \times 10^n$ ,  $1 \leq A < 10$ , where  $n$  is a positive or negative integer or zero
- Calculate possible rounding/estimating errors expressed using inequality notation  $a < x \leq b$
- Appreciate the infinite nature of the set of integers, real and rational numbers
- Find approximate solutions to problems from a variety of functions including piecewise linear, exponential and reciprocal graphs
- Recognise geometric sequences
- Direct and indirect proportion including graphical and algebraic representations
- Use trig ratios in similar triangles to solve problems involving right-angled triangles
- Interpret mathematical relationships both algebraically and geometrically
- Venn diagrams in probability

## Old KS3



### New KS2

- Comparing and ordering fractions greater than 1
- Long division
- 4 operations with fractions
- Calculate decimal equivalent of fractions
- Understand and use order of operations
- Plot points in all 4 quadrants
- Convert between miles and kilometres
- Name radius/diameter and know relationship
- Use formulae for area/volume of shapes
- Calculate area of triangles & parallelograms
- Calculate volume of 3-D shapes
- Use letters to represent unknowns (algebra)
- Generate and describe linear sequences
- Find solutions to unknowns in problems

Find more support for 11-19 Maths including, schemes of work and resources to prepare your Year 9s for the Maths GCSE (9-1) - visit [www.pearsonschools.co.uk/11-19mathssupport](http://www.pearsonschools.co.uk/11-19mathssupport)