

### **Y10 end of year exam – Revision list (Higher)**

- 1) Laws of Indices including negative and fractional indices
- 2) Add, subtract, multiply and divide decimals and whole numbers, round to decimal places and significant figures and estimate answers to calculations by rounding to 1 significant figure
- 3) Use Pythagoras' Theorem and trigonometry on right-angles triangles, find angles of elevation and depression and know the exact values for sin, cos and tan of 0, 30, 45, 60 and 90 degrees
- 4) Algebra: simplify expressions, expand single and double brackets, factorise into brackets, derive formulae, solve linear equations involving brackets, fractions and the unknown on both sides, substitute into formulae, change the subject of a formula, know the difference between an equation and an identity and use iteration to approximate solutions.
- 5) Convert between fractions, percentages and decimals, calculate with fractions including mixed numbers, express a number as a percentage of another number, find a percentage of a quantity, find a percentage increase or decrease, use multipliers to find a percentage and to increase/decrease by a percentage and find the original amount.
- 6) Two way tables, stem and leaf diagrams, calculate the mean, median, mode and range from a frequency table, construct a frequency table for continuous data, estimate the mean for continuous table.
- 7) Use angle facts of triangles, quadrilaterals, parallel lines, interior and exterior angles in polygons and regular polygons
- 8) Factors, Multiples and Primes, finding HCF and LCM using prime factors and Venn diagrams, Standard Form calculations with and without a calculator, simplifying and calculating with surds
- 9) Graphs: Straight line graphs,  $y=mx+c$ , real-life graphs, distance-time and velocity time graphs
- 10) Sequences: Using and finding the  $n$ th term of an arithmetic sequence, a quadratic sequence and a geometric sequence
- 11) Solving Quadratic Equations by factorisation, completing the square and the quadratic formula
- 12) Perimeter and area of shapes (including the circle) and compound shapes, calculate arc lengths and the area of sectors

Please note: there may be some number problem solving questions and topics you studied in Year 9 such as Similar shapes, transformations including enlargements, proportion, angles in polygons, probability, solving simultaneous equations and scatter diagrams.

### **Y10 end of year exam – Revision list (Higher)**

- 1) Laws of Indices including negative and fractional indices
- 2) Add, subtract, multiply and divide decimals and whole numbers, round to decimal places and significant figures and estimate answers to calculations by rounding to 1 significant figure
- 3) Use Pythagoras' Theorem and trigonometry on right-angles triangles, find angles of elevation and depression and know the exact values for sin, cos and tan of 0, 30, 45, 60 and 90 degrees
- 4) Algebra: simplify expressions, expand single and double brackets, factorise into brackets, derive formulae, solve linear equations involving brackets, fractions and the unknown on both sides, substitute into formulae, change the subject of a formula, know the difference between an equation and an identity and use iteration to approximate solutions.
- 5) Convert between fractions, percentages and decimals, calculate with fractions including mixed numbers, express a number as a percentage of another number, find a percentage of a quantity, find a percentage increase or decrease, use multipliers to find a percentage and to increase/decrease by a percentage and find the original amount.
- 6) Two way tables, stem and leaf diagrams, calculate the mean, median, mode and range from a frequency table, construct a frequency table for continuous data, estimate the mean for continuous table.
- 7) Use angle facts of triangles, quadrilaterals, parallel lines, interior and exterior angles in polygons and regular polygons
- 8) Factors, Multiples and Primes, finding HCF and LCM using prime factors and Venn diagrams, Standard Form calculations with and without a calculator, simplifying and calculating with surds
- 9) Graphs: Straight line graphs,  $y=mx+c$ , real-life graphs, distance-time and velocity time graphs
- 10) Sequences: Using and finding the  $n$ th term of an arithmetic sequence, a quadratic sequence and a geometric sequence
- 11) Solving Quadratic Equations by factorisation, completing the square and the quadratic formula
- 12) Perimeter and area of shapes (including the circle) and compound shapes, calculate arc lengths and the area of sectors

Please note: there may be some number problem solving questions and topics you studied in Year 9 such as Similar shapes, transformations including enlargements, proportion, angles in polygons, probability, solving simultaneous equations and scatter diagrams.