

# HIGHER CHECKLIST 2017

## HIGHER - Grades 4 – 9

### Algebra

| I can do this | Grade | Title   |
|---------------|-------|---|
|               | 9     | Approximate solutions to equations using iteration. |
|               | 9     | Equation of a circle                                |
|               | 9     | Equation of a tangent                               |
|               | 8     | Algebra and Proof                                   |
|               | 8     | Gradients and area under a graph                    |
|               | 8     | Graphs of trigonometric functions                   |
|               | 8     | Quadratic equations (completing the square)         |
|               | 7     | Composite functions                                 |
|               | 7     | Expand the product of two or more binomials         |
|               | 7     | Factorising difficult quadratic expressions         |
|               | 7     | Geometric Sequences                                 |
|               | 7     | Graphs of exponential functions                     |
|               | 7     | Quadratic equations (needing re-arrangement)        |
|               | 7     | Quadratic equations (quadratic formula)             |
|               | 7     | Real-life exponential graphs                        |
|               | 7     | Represent quadratic inequalities                    |
|               | 7     | Simultaneous equations (non-linear)                 |
|               | 7     | Solve quadratic inequalities                        |
|               | 7     | Translations and reflections of a function          |
|               | 7     | Turning points & completing the square              |
|               | 6     | Algebraic fractions                                 |
|               | 6     | Identifying parallel lines                          |
|               | 6     | Inverse functions                                   |
|               | 6     | Linear inequalities in two variables                |
|               | 6     | $n$ th term of a quadratic sequence                 |
|               | 6     | Quadratic equations (factorisation)                 |

| I can do this | Grade | Title   |
|---------------|-------|---|
|               | 6     | Quadratic equations (graphical methods)             |
|               | 6     | Represent linear inequalities                       |
|               | 6     | Simultaneous equations (linear)                     |
|               | 5     | Algebraic argument                                  |
|               | 5     | Algebraic terminology                               |
|               | 5     | Cubic and Reciprocal graphs                         |
|               | 5     | Deduce quadratic roots algebraically                |
|               | 5     | Derive an equation                                  |
|               | 5     | Equation of a line                                  |
|               | 5     | Expand the product of two binomials                 |
|               | 5     | Factorising quadratic expressions                   |
|               | 5     | Fibonacci, quadratic and simple geometric sequences |
|               | 5     | Graphical solution to equations                     |
|               | 5     | Inequalities on number lines                        |
|               | 5     | Linear equations                                    |
|               | 5     | Quadratic graphs                                    |
|               | 5     | Reciprocal real-life graphs                         |
|               | 5     | Simplify indices                                    |
|               | 5     | Simplify surds                                      |
|               | 5     | Solve linear inequalities in one variable           |
|               | 5     | Writing formulae and expressions                    |
|               | 4     | Changing the subject                                |
|               | 4     | Collecting like terms                               |
|               | 4     | Expressions   |
|               | 4     | Factorise single bracket                            |
|               | 4     | Finding the equation of a line                      |
|               | 4     | Graphs of linear functions                          |
|               | 4     | Graphs of quadratic functions                       |
|               | 4     | Linear equations one unknown                        |
|               | 4     | Multiplying single brackets                         |
|               | 4     | Non-standard real life graphs                       |
|               | 4     | $n$ th term of a linear sequence                    |
|               | 4     | Number machines                                     |
|               | 4     | Substitution  |
|               | 4     | Using " $y = mx + c$ "                              |

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## Geometry and Measures

| I can do this | Grade | Title   |
|---------------|-------|---|
|               | 8     | Circle theorems                                 |
|               | 8     | Vector arguments and proof                      |
|               | 7     | Area of a triangle                              |
|               | 7     | Cosine Rule                                     |
|               | 7     | Pythagoras and trig 2D and 3D                   |
|               | 7     | Sine Rule                                       |
|               | 6     | Combined transformations                        |
|               | 6     | Congruence and Similarity                       |
|               | 6     | Standard trigonometric ratios                   |
|               | 5     | Arc lengths and sectors                         |
|               | 5     | Derive triangle results                         |
|               | 5     | Enlargements and negative SF                    |
|               | 5     | Loci  |
|               | 5     | Pythagoras                                      |
|               | 5     | Similarity and Congruence                       |
|               | 5     | Standard constructions                          |
|               | 5     | Surface Area                                    |
|               | 5     | Trigonometric ratios                            |
|               | 5     | Volume  |
|               | 4     | Alternate and corresponding angles              |
|               | 4     | Area of a circle                                |
|               | 4     | Areas of composite shapes                       |
|               | 4     | Areas of triangles, trapezia and parallelograms |
|               | 4     | Bearings  |
|               | 4     | Circle terminology                              |
|               | 4     | Circumference of a circle                       |
|               | 4     | Congruent triangles                             |
|               | 4     | Enlargements and fractional SF                  |
|               | 4     | Perimeter of 2D shapes                          |
|               | 4     | Plans and elevations                            |
|               | 4     | Polygons  |
|               | 4     | Solve geometrical problems                      |
|               | 4     | Vector arithmetic                               |
|               | 4     | Volume of prisms                                |

## Statistics

| I can do this | Grade | Title                                |
|---------------|-------|--------------------------------------|
|               | 6     | Boxplots                             |
|               | 6     | Cumulative frequency                 |
|               | 6     | Histograms with unequal class widths |
|               | 6     | Quartiles and Interquartile Range    |
|               | 5     | Histograms with equal class widths   |
|               | 5     | Scatter graphs                       |
|               | 4     | Comparing data using graphs          |
|               | 4     | Comparing Distributions              |
|               | 4     | Correlation                          |
|               | 4     | Population                           |
|               | 4     | Sampling                             |
|               | 4     | Scatter Diagrams                     |
|               | 4     | Time series                          |

## Probability

| I can do this | Grade | Title                             |
|---------------|-------|-----------------------------------|
|               | 7     | Conditional Probability           |
|               | 5     | Probability of dependent events   |
|               | 5     | Probability of independent events |
|               | 4     | Mutually exclusive sum            |
|               | 4     | Relative Frequency                |
|               | 4     | Tables and Grids                  |
|               | 4     | Theoretical Probability           |
|               | 4     | Unbiased Samples                  |
|               | 4     | Venn Diagrams                     |

## HIGHER CHECKLIST 2017

### Number

| I can do this | Grade | Title                                |
|---------------|-------|--------------------------------------|
|               | 8     | Surds                                |
|               | 7     | Index Laws (negative and fractional) |
|               | 7     | Product rule                         |
|               | 7     | Recurring Decimals                   |
|               | 7     | Upper and lower bounds               |
|               | 6     | Finance 1                            |
|               | 6     | Powers and Roots                     |
|               | 6     | Product of prime factors             |
|               | 6     | Using Pi                             |
|               | 5     | Calculating with fractions           |
|               | 5     | Error intervals                      |
|               | 5     | Index Laws                           |
|               | 5     | Limits of accuracy                   |
|               | 4     | Adding and subtracting fractions     |
|               | 4     | Checking calculations                |
|               | 4     | Compound measures                    |
|               | 4     | Converting metric units              |
|               | 4     | Estimation                           |
|               | 4     | Fractions and percentages            |
|               | 4     | Fractions and ratio problems         |
|               | 4     | Interpret calculator displays        |
|               | 4     | LCM and HCF                          |
|               | 4     | Multiples and factors                |
|               | 4     | Multiplying fractions                |
|               | 4     | Operations                           |
|               | 4     | Order of operations                  |
|               | 4     | Powers                               |
|               | 4     | Rounding                             |
|               | 4     | Standard Form                        |
|               | 4     | Terminating decimals and fractions   |

### Ratio, Proportion and rates of change

| I can do this | Grade | Title                                       |
|---------------|-------|---|
|               | 9     | Gradients and the rate of change            |
|               | 7     | General iterative processes                 |
|               | 6     | Direct and inverse proportion               |
|               | 5     | Compound Units                              |
|               | 5     | Gradient & the rate of change               |
|               | 5     | Growth and decay                            |
|               | 5     | Interpret Proportion                        |
|               | 5     | Percentage change                           |
|               | 5     | Problems with compound units                |
|               | 5     | Scale factors and similarity                |
|               | 5     | Simple Interest and Financial Maths         |
|               | 5     | Solve Proportion Problems                   |
|               | 4     | Compare Fractions, Decimals and Percentages |
|               | 4     | Compare lengths, area, volume               |
|               | 4     | Comparing quantities as a ratio             |
|               | 4     | Division of a quantity as a ratio           |
|               | 4     | Express one quantity as a % of another      |
|               | 4     | Percentage change                           |
|               | 4     | Problems involving ratio                    |
|               | 4     | Proportion and ratio                        |
|               | 4     | Ratio and fractions                         |
|               | 4     | Ratio Sharing                               |