Higher Skills List

## Number

| Topic | Topic code | R | A | G |
| :--- | :---: | :---: | :---: | :---: |
| Calculating with roots and fractional indices | U851, U985, U772, U299 |  |  |  |
| Converting recurring decimals to fractions | U689 |  |  |  |
| Surds | U338, U663, U872, U499 |  |  |  |
| Rationalising the denominator | U707, U281 |  |  |  |
| Error intervals | U657, U301, U587 |  |  |  |

## Algebra

| Topic | Topic code | R | A | G |
| :---: | :---: | :---: | :---: | :---: |
| Expanding triple brackets | U606 |  |  |  |
| Operations with algebraic fractions | U685, U457, U824 |  |  |  |
| Factorising quadratic expressions: $\mathrm{ax}^{2}+\mathrm{bx}+\mathrm{c}$ | U858 |  |  |  |
| Simplifying algebraic fractions | U294 |  |  |  |
| Factorising to solve quadratics equations | U228, U960 |  |  |  |
| Using the quadratic formula | U665 |  |  |  |
| Completing the square to solve quadratics | U397, U589 |  |  |  |
| Quadratic equations in context | U150 |  |  |  |
| Quadratic simultaneous equations | U547 |  |  |  |
| Index laws | U235, U694, U662 |  |  |  |
| Equation of a straight line: Perpendicular lines | U898 |  |  |  |
| Quadratic graphs: Turning points | U769 |  |  |  |
| Quadratic simultaneous equations on graphs | U875 |  |  |  |
| Exponential graphs | U229 |  |  |  |
| Exponential growth and decay problems | U988 |  |  |  |
| Trigonometric graphs | U450 |  |  |  |
| Graph transformations | U598, U487, U455 |  |  |  |
| Velocity-time graphs | U937, U562, U611 |  |  |  |
| Rate of change graphs | U638, U652, U862 |  |  |  |
| Estimating gradient from a curve | U800 |  |  |  |
| Estimating area under a curve | U882 |  |  |  |
| Equation of a circles and tangents | U567 |  |  |  |
| Linear inequalities as graph regions | U747 |  |  |  |
| Quadratic inequalities | U133 |  |  |  |
| Functions | U637, U895, U448, U996 |  |  |  |
| Recurrence relations | U171 |  |  |  |
| Quadratic sequences | U206 |  |  |  |
| Iteration and numerical methods | U434, U168 |  |  |  |
| Algebraic proof | U582 |  |  |  |

## Ratio and proportion

Higher Skills List

| Topic | Topic code | R | A | G |
| :--- | :---: | :---: | :---: | :---: |
| Algebraic direct and inverse proportion | U407, U138 |  |  |  |
| Compound units: Density problem solving | U910 |  |  |  |

## Geometry

| Topic | Topic code | R | A | G |
| :--- | :---: | :---: | :---: | :---: |
| Congruence proofs | U866, U887 |  |  |  |
| Enlargements | U134 |  |  |  |
| Describe combined transformations | U766 |  |  |  |
| Circle theorems: Angles inside a circle | U459, U251 |  |  |  |
| Circle theorems: Tangents and chords | U489, U130 |  |  |  |
| Circle theorems problems | U808 |  |  |  |
| Prove circle theorems | U807 |  |  |  |
| Volume of frustums | U350 |  |  |  |
| Volume: Problem solving | U543, U426 |  |  |  |
| Similar Shapes: Area and volume | U630, U110 |  |  |  |
| Pythagoras' Theorem in 2D and 3D | U385, U541 |  |  |  |
| Right-angled trigonometry: Problem solving | U319, U283, U545, U967 |  |  |  |
| 3D trigonometry | U170 |  |  |  |
| The area rule | U592 |  |  |  |
| Sine rule | U952 |  |  |  |
| Cosine rule | U591 |  |  |  |
| Trigonometry and bearings | U164 |  |  |  |
| Vectors problems | U781, U560 |  |  |  |

## Probability

| Topic | Topic code | R | A | G |
| :--- | :---: | :---: | :---: | :---: |
| Product rule for counting | U369 |  |  |  |
| Conditional probability | U246, U821, U806 |  |  |  |
| Probability from Venn diagrams | U476, U748, U699 |  |  |  |

## Statistics

| Topic | Topic code | R | A | G |
| :--- | :---: | :---: | :---: | :---: |
| Averages | U877, U717 |  |  |  |
| Cumulative frequency diagrams | U182, U642 |  |  |  |
| Box plots | U879, U837, U507 |  |  |  |
| Frequency polygons | U840 |  |  |  |
| Histograms | U814, U983, U267 |  |  |  |
| Capture-recapture | U328 |  |  |  |

