**0-9 Scale descriptions for Food Technology - UWS**

| Stage | Description | |
|---|---|---|
| 8,9 and higher | Upper and lower bounds<br>Surds<br>Perpendicular lines<br>Completing the square<br>Algebraic fractions<br>Simultaneous equations with a quadratic<br>Solving quadratic inequalities | Finding the nth term of a quadratic<br>Inverse functions<br>Composite functions<br>Velocity-time graphs<br>Pythagoras in 3D<br>Trigonometry in 3D<br>Vectors |
| 7 | Functional indices<br>Recurring decimals-proof<br>Rearranging difficult formula<br>Factorising hard quadratics<br>Algebraic proof<br>Exponential functions<br>Trigonometric graphs<br>Transformation of functions<br>Equation of the circle | Regions<br>Direct and inverse proportion<br>Similarity- area and volume<br>The Sine rule<br>The Cosine rule<br>Area of a triangle using Sine<br>And or probability questions<br>Histograms<br>Solving quadratics with a formula. |
| 6 | Recurring decimals to fractions<br>Product of three binomials<br>Iteration-trial and improvement<br>Iterative processes<br>Enlargement-negative scale factors<br>Combinations of transformations<br>Circle theorems<br>Proof of circle theorems<br>Probability using Venn diagrams<br>Cumulative frequency<br>Boxplots | |

| 5 | Negative indices<br>Error intervals<br>Mathematical reasoning<br>Factorising and solving quadratics<br>The difference of two squares<br>Finding the equation of a straight line<br>Roots and turning points of quadratics<br>Cubic and reciprocal graphs<br>Simultaneous equations algebraically<br>Geometric progressions<br>Compound interest and depreciation<br>Loci<br>Congruent triangles<br>Solving equations | Sectors of a circle<br>Trigonometry<br>Spheres<br>Pyramids<br>Cones<br>Frustums<br>Exact trigonometric values<br>Introduction to vectors<br>Harder tree diagrams<br>Stratified sampling<br>Rearranging simple formulae<br>Forming formulae and equations<br>Inequalities on a number line |
|---|---|---|
| 4 | Index notation<br>Introduction to bounds<br>Midpoint of a line on a graph<br>Expanding and simplifying brackets<br>Solving linear inequalities<br>Simultaneous equations graphically<br>Fibonacci sequences<br>Compound units<br>Distance –time graphs<br>Similar shapes | Bisecting an angle<br>Constructing perpendiculars<br>Drawing a triangle using compasses<br>Enlargements<br>Tangents, arcs, sectors and segments<br>Pythagoras' theorems<br>Simple tree diagrams<br>Sampling populations<br>Time series |

| 3 | Multiplying decimals | Finding the nth term |
|---|---|---|
| | Dividing decimals | Special sequences |
| | Four rules of negatives | Exchanging money |
| | Listing strategies | Sharing using ratio |
| | Comparing fractions | Ratios, fractions and graphs |
| | Adding and subtracting fractions | Increase/decrease by a percentage |
| | Finding a fraction of an amount | Percentage change |
| | Multiplying fractions | Reverse percentage problems |
| | BODMAS/BIDMAS | Simple interest |
| | Reciprocals | Metric conversions |
| | Calculator questions | Problems on coordinate axes |
| | Product of primes | Surface area of a prism |
| | Highest common factor(HCF) | Volume of a cuboid |
| | Lowest common Multiple(LCM) | Circle definitions |
| | Squares, cubes and roots | Area of a circle |
| | Working with indices | Circumference of a circle |
| | Standard form | Volume of a prism |
| | Decimals and fractions | Angles and parallel lines |
| | Fractions, percentages, decimals | Angles in a triangle |
| | Percentage of an amount (Calc) | Properties of special triangles |
| | Percentage of an amount (Non-calc) | Angle sum of polygons |
| | Rounding to significant figures | Bearings |
| | Estimating answers | Experimental probabilities |
| | Using place value | Possibility spaces |
| | Expanding brackets | Venn diagrams |
| | Simple factorisation | Pie charts |
| | Substitution | Scatter diagrams |
| | Straight line graphs | Averages from a table |
| | The gradient of a line | Change to percentages (Calc) |
| | Drawing quadratic graphs | Change to percentages (Non-calc) |
| | Sketching functions | |
| | Solving equations using flow charts | |
| | Subject of a formula using flow charts | |
| | Generate a sequence to the nth term | |
| | Dividing fractions | |

| | |
|---|---|
| 2 | Adding integers and decimals<br>Subtracting integers and decimals<br>Multiplying integers<br>Dividing integers<br>Inverse operations<br>Money questions<br>Negatives in real life<br>Introduction to fractions<br>Equivalent fractions<br>Simplifying fractions<br>Half-way values<br>Factors, multiples and primes<br>Introduction to powers/indices<br>Multiply and divide by powers of 10<br>Rounding to the nearest 10, 100 ect<br>Rounding to decimal places<br>Simplifying- addition and subtraction<br>Simplifying- multipication<br>Simplifying- division<br>Function machines<br>Generating a sequence- term to term.<br>Introduction to ratio<br>Using ratio for recipe questions<br>Introduction to percentages<br>Value for money<br>Introduction to proportion | Properties of solids<br>Nets<br>Angles on a line and at a point<br>Measuring and drawing angles<br>Drawing a triangle using a protractor<br>Reflections<br>Rotations<br>Translations<br>Plans and elevations<br>Perimeters<br>Area of a rectangle<br>Area of a triangle<br>Area of a parallelogram<br>Area of a trapezium<br>Frequency trees<br>Listing outcomes<br>Calculating probabilities<br>Mutually exclusive events<br>Two way tables<br>Averages and the range<br>Data-discrete and continuous<br>Vertical line charts<br>Frequency tables and diagrams |
| 1 | Place value<br>Ordering integers<br>Ordering decimals<br>Reading scales<br>Simple mathematical notation<br>Interpreting real life tables<br>Introduction to algebraic conventions<br>Coordinates<br>Simple geometric definitions<br>Polygons<br>Symmetries<br>Tessellations and congruent shapes<br>Names of angles<br>The probability scale<br>Tally charts and bar charts<br>Pictograms | |