

Functional Skills Maths L1/L2 topic outline

| Topic | L1 | L2 (in addition to L1) |
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| Number topics | | |
| Place value | Read, write, order and compare large numbers up to one million Recognise negative numbers, e.g. temperature | Order and compare any size positive and negative numbers |
| Rounding | Approximate whole numbers by rounding Approximate decimals by rounding to a whole number, 10,100,1000 or one or two decimal places | Round decimals when solving practical problems |
| Number skills | Add and subtract using three digit whole numbers Multiplying and divide whole numbers and decimals by 10,100,1000 | |
| Number skills | Multiply 2 digit whole numbers by single and double digit whole numbers. (Long multiplication) From E3 content. Multiply whole numbers 0x0 to 12x12 and calculate square numbers | |
| Number skills | Divide 3 digit whole numbers by single and double digit whole numbers | |
| Order of operations | Solve problems involving positive numbers, using the standard order of operations to solve multi-step calculations | Includes indices |
| Decimals | Add subtract multiply and divide decimals up to 2 decimal places | Order, approximate and compare decimals Add subtract multiply and divide decimals up to 3 decimal places |
| Fractions | Simplify fractions to find equivalent forms Find parts of whole number quantities or measurements, e.g. $\frac{2}{3}$ or $\frac{3}{4}$ Read, write order and compare Mixed Fractions | Express one number as a fraction of another number. Order, add, subtract and compare using proper, improper and mixed fractions |

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| Ratio | Calculate simple ratio and direct proportion | And inverse proportion |
| Convert between FDP | Recognise and calculate equivalences between common fractions, percentages and decimals. With and without a calculator | Identify equivalencies between fractions, decimals and percentages |
| Percentages | Calculate simple percentage increase and decrease. Including simple interest and discounts in multiples of 5% | Express one numbers as a percentage of another number Calculate percentage change, and original value after percentage change (reverse percentages) Calculate compound interest |
| Substitute into Formula | Form word expressions from simple expressions in symbols; evaluate simple expressions and formulae Translate simple word problems into symbols and numbers Including speed distance time | Evaluate expressions and make substitutions in given formulae in words and symbols. |
| Time & timetables | Read and measure time accurately and use timetables Calculate using time in familiar contexts | Calculate, measure and record time in complex contexts |

Handling data topics

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| Probability | Use the vocabulary of probability to discuss the likelihood of events Express the likelihood of an event using fractions, and on a scale of 0 to 1 | Identify the range of possible outcomes of combined events and record using diagrams or tables including two-way tables Express probability as fractions, decimals and percentages |
| Averages | Calculate and make statements about the Mean and Range | Calculate and make statements about the Mean and Range and Median and Mode Estimate mean. |
| Graphs and Charts | Collect, organise and represent discrete data, e.g. tables, diagrams, charts, line graphs , Bar graphs and pie charts. | + scatter graphs and recognise positive and negative correlation |

Shape, space and measure topics

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| Conversions | Convert between units of length, weight, capacity, money and time in the same | Convert metric and imperial units of length, weight, and capacity using a) conversion factor and b) a conversion graph |
| Calculate using compound measures | N/A | Speed distance time, Density mass volume and rates of pay. |
| Area and Perimeter, Volume. | Work out area, perimeter of simple shapes including those made up of a combination of rectangles. Calculate volume of cubes and cuboids | Calculate perimeters and areas of 2-d shapes including triangles and circles and composite shapes including non-rectangular shapes. Formula not given for triangles or circles)Volume of regular shapes, e.g. cylinders, cuboids Use formulae to in surface areas of 3-D shapes (formula given expect for cylinders) |
| 2D and 3D shapes | Draw 2-d shapes and demonstrate an understanding of lines of symmetry | Understand and use common 2-D representations of 3d objects (nets) Draw 3-D shapes to include plans and elevations |
| Scale drawings | Recognise and make use of simple scales on maps and drawings Work out dimensions from drawings with simple shapes, e.g. 1cm represents 1m | Calculate actual dimensions from scale drawings and create a scale diagram given actual measurements. |
| Plans and Elevation | Interpret plans, elevations and nest of simple 2d shapes. | Use co-ordinates in 2-D , positive and negative to specify positions of points. |
| Angles | Use angles when describing position and direction and measure angles. Bearings and angle facts Points on compass. | |