Year 10

Week	Strand	Topic	Estimated Hours
1	N1, N2, N3, N13, N15	Number 1b - Decimals	4-6
2		Number 1b – Decimals	
3	A4, A6	Algebra 2b – Expressions, expanding + factorising	5-7
4		Algebra 2b – Expressions, expanding + factorising	
5	S2, S4	Statistics 3b – Charts + Graphs	6-8
6		Statistics 3b – Charts + Graphs	
7		**REVIEW/ASSESS/DIRT WEEK 1**	
8	N1, N2, N8, N10, R9	FDP 4b – Basic conversions and uses	3-5
9	N1, N15, N16, A7, A22	Inequalities 5b – One and two sided	4-6
10		Inequalities 5b – One and two sided	
11	G1, G3, G5, G11	Interior + Exterior angles 6b – Regular polygons	5-7
12		Interior + Exterior angles 6b – Regular polygons	
13	S2, S4	The averages 7b – Basic averages	5-7
14		The averages 7b – Basic averages	
15		**REVIEW/ASSESS/DIRT WEEK 2** Xmas Activities	
16	N1, R1, G12, G16	3D forms + volumes 8b – Naming in 3D and basic volumes	5-7
17		3D forms + volumes 8b - Naming in 3D and basic volumes	
18	A7, A9, A10, A12, A17	Straight line graphs 9b – Equations of straight line graphs	5-7
19		Straight line graphs 9b – Equations of straight line graphs	
20	R6, G1, G7	Transformations 10b – Reflections and enlargements	7-9
21		Transformations 10b – Reflections and enlargements	
22		**REVIEW/ASSESS/DIRT WEEK 3**	
23	R1, R5, R7, R10, R14	Proportion 11b – Direct and inverse proportion	5-7
24		Proportion 11b – Direct and inverse proportion	
25	N7, N15, A4, G6, G20, G21	Pythagoras/Trigonometry 12	5-7
26		Pythagoras/Trigonometry 12	
27	N5, P1, P2, P3, P5, P7, P8	Probability 13b - Probability 2	8-10
28		Probability 13b - Probability 2	
29	R2, G2, G5, G15	Constructions, Loci, Bearings 15b	9-11
30		Constructions, Loci, Bearings 15b	
31		Constructions, Loci, Bearings 15b	
32		**REVIEW/ASSESS/DIRT WEEK 4**	
33	A4, A11, A18	Quadratics 16a – Expanding and factorising	4-6
34	N2, N3	Fractions + Reciprocals 18a – Basic operations	4-6
35	N7, N9	Indices + Standard forms 18b – Manipulation and use	5-7
36		**REVIEW/ASSESS/DIRT WEEK 5**	
37		**Work Experience**	
38		**Work Experience**	
39			

Number 1b – Decimals Teaching time: 4-6 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Use decimal notation and place value;
- Identify the value of digits in a decimal or whole number;
- Compare and order decimal numbers using the symbols <, >;
- Understand the ≠ symbol (not equal);
- Write decimal numbers of millions, e.g. 2 300 000 = 2.3 million;
- Add, subtract, multiply and divide decimals;
- Multiply or divide by any number between 0 and 1;
- Round to the nearest integer;
- Round to a given number of decimal places;
- Round to any given number of significant figures;
- Estimate answers to calculations by rounding numbers to 1 significant figure;
- Use one calculation to find the answer to another.

POSSIBLE SUCCESS CRITERIA

Use mental methods for × and ÷, e.g. 5 × 0.6, 1.8 ÷ 3.
Solve a problem involving division by a decimal (up to 2 decimal places).
Given 2.6 × 15.8 = 41.08, what is 26 × 0.158? What is 4108 ÷ 26?
Calculate, e.g. 5.2 million + 4.3 million.

COMMON MISCONCEPTIONS

Significant figures and decimal place rounding are often confused. Some students may think 35 877 = 36 to two significant figures.

NOTES

Practise long multiplication and division, use mental maths problems with decimals such as 0.1, 0.001.

Amounts of money should always be rounded to the nearest penny.

Algebra 2b – Expressions, expanding and factorising. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Multiply a single number term over a bracket;
- Write and simplify expressions using squares and cubes;
- Simplify expressions involving brackets, i.e. expand the brackets, then add/subtract;
- Argue mathematically to show algebraic expressions are equivalent;
- Recognise factors of algebraic terms involving single brackets;
- Factorise algebraic expressions by taking out common factors.

POSSIBLE SUCCESS CRITERIA

Expand and simplify $3(t - 1)$.

Understand $6x + 4 \neq 3(x + 2)$.

Argue mathematically that $2(x + 5) = 2x + 10$.

COMMON MISCONCEPTIONS

$3(x + 4) = 3x + 4$.

The convention of not writing a coefficient with a single value, i.e. x instead of $1x$, may cause confusion.

NOTES

Provide students with lots of practice.

This topic lends itself to regular reinforcement through starters in lessons

Statistics 3b – Charts and graphs. Teaching time: 6-8 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Plotting coordinates in first quadrant and read graph scales in multiples;
- Produce:
  - pictograms;
  - composite bar charts;
  - dual/comparative bar charts for categorical and ungrouped discrete data;
  - bar-line charts;
  - vertical line charts;
  - line graphs;
  - line graphs for time–series data;
  - histograms with equal class intervals;
  - stem and leaf (including back-to-back);
- Interpret data shown in
  - pictograms;
  - composite bar charts;
  - dual/comparative bar charts;
  - line graphs;
  - line graphs for time–series data;
  - histograms with equal class intervals;
  - stem and leaf;
- Calculate total population from a bar chart or table;
- Find greatest and least values from a bar chart or table;
- Find the mode from a stem and leaf diagram;
- Identify the mode from a bar chart;
- Recognise simple patterns, characteristics, relationships in bar charts and line graphs.

POSSIBLE SUCCESS CRITERIA

Decide the most appropriate chart or table given a data set.

State the mode, smallest value or largest value from a stem and leaf diagram.

NOTES

Ensure that you include a variety of scales, including decimal numbers of millions and thousands, time scales in hours, minutes, seconds.

Misleading graphs are a useful life skill.

FDP 4b – Basic conversions and uses. Teaching time: 3-5 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Recall the fraction-to-decimal conversion;
- Convert between fractions and decimals;
- Convert a fraction to a decimal to make a calculation easier,

  e.g. $0.25 \times 8 = \frac{1}{4} \times 8$, or

  $\frac{3}{8} \times 10 = 0.375 \times 10$;
- Recognise recurring decimals and convert fractions such as $\frac{3}{7}$, $\frac{1}{3}$ and $\frac{2}{3}$ into recurring decimals;
- Compare and order fractions, decimals and integers, using inequality signs;
- Understand that a percentage is a fraction in hundredths;
- Express a given number as a percentage of another number;
- Convert between fractions, decimals and percentages;
- Order fractions, decimals and percentages, including use of inequality signs.

POSSIBLE SUCCESS CRITERIA

Write terminating decimals (up to 3 d.p.) as fractions.

Convert between fractions, decimals and percentages, common ones such as $\frac{1}{2}$, $\frac{1}{10}$, $\frac{1}{4}$, $\frac{3}{4}$ and $\frac{n}{10}$.

Order integers, decimals and fractions.

COMMON MISCONCEPTIONS

Incorrect links between fractions and decimals, such as thinking that $\frac{1}{5}$ = 0.15, 5% = 0.5, 4% = 0.4, etc.

It is not possible to have a percentage greater than 100%.

NOTES

Students should be reminded of basic percentages and fraction conversions.

Emphasise the importance of being able to convert between fractions, decimals and percentages to make calculations easier.

Inequalities 5b – One and two sided. Teaching time: 4-6 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Show inequalities on number lines;
- Write down whole number values that satisfy an inequality;
- Solve an inequality such as $-3 < 2x + 1 < 7$ and show the solution set on a number line;
- Solve two inequalities in x, find the solution sets and compare them to see which value of x satisfies both;
- Use the correct notation to show inclusive and exclusive inequalities;
- Construct inequalities to represent a set shown on a number line;
- Solve simple linear inequalities in one variable, and represent the solution set on a number line;
- Round answers to a given degree of accuracy.

POSSIBLE SUCCESS CRITERIA

Solve $-3 < 2x + 1$ and show the solution set on a number line.
State the whole numbers that satisfy a given inequality.
Recognise that measurements given to the nearest whole unit may be inaccurate by up to one half in either direction.

COMMON MISCONCEPTIONS

When solving inequalities, students often state their final answer as a number quantity and either exclude the inequality or change it to =.

NOTES

Emphasise the importance of leaving their answer as an inequality (and not change to =).

Interior and Exterior Angles 6b – Regular polygons. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Recognise and name pentagons, hexagons, heptagons, octagons and decagons;
- Understand 'regular' and 'irregular' as applied to polygons;
- Use the sum of angles of irregular polygons;
- Calculate and use the sums of the interior angles of polygons;
- Calculate and use the angles of regular polygons;
- Use the sum of the interior angles of an n-sided polygon;
- Use the sum of the exterior angles of any polygon is 360°;
- Use the sum of the interior angle and the exterior angle is 180°;
- Identify shapes which are congruent (by eye);
- Explain why some polygons fit together and others do not;

POSSIBLE SUCCESS CRITERIA

Deduce and use the angle sum in any polygon.
Derive the angle properties of regular polygons.
Given the size of its exterior angle, how many sides does the polygon have?

COMMON MISCONCEPTIONS

Pupils may believe, incorrectly, that all polygons are regular.

NOTES

Study Escher drawings.

Use examples of tiling patterns with simple shapes to help students investigate if shapes 'fit together'.

The Averages 7b – Basic averages. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Calculate the mean, mode, median and range for discrete data;
- Can interpret and find a range of averages as follows:
  - median, mean and range from a (discrete) frequency table;
  - range, modal class, interval containing the median, and estimate of the mean from a grouped data frequency table;
  - mode and range from a bar chart;
  - median, mode and range from stem and leaf diagrams;
  - mean from a bar chart;
- Understand that the expression 'estimate' will be used where appropriate, when finding the mean of grouped data using mid-interval values;
- Compare the mean, median, mode and range (as appropriate) of two distributions using bar charts, dual bar charts, pictograms and back-to-back stem and leaf;
- Recognise the advantages and disadvantages between measures of average.

POSSIBLE SUCCESS CRITERIA

State the median, mode, mean and range from a small data set.
Extract the averages from a stem and leaf diagram.
Estimate the mean from a table.

COMMON MISCONCEPTIONS

Often the $\Sigma(m \times f)$ is divided by the number of classes rather than Σf when estimating the mean.

NOTES

Encourage students to cross out the midpoints of each group once they have used these numbers to in $m \times f$. This helps students to avoid summing m instead of f.
Remind students how to find the midpoint of two numbers.
Emphasise that continuous data is measured, i.e. length, weight, and discrete data can be counted, i.e. number of shoes.
When comparing the mean and range of two distributions support with 'copy and complete' sentences, or suggested wording.

3D Forms and Volumes 8b – Naming in 3D and basic volumes. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Identify and name common solids: cube, cuboid, cylinder, prism, pyramid, sphere and cone;
- Sketch nets of cuboids and prisms;
- Recall and use the formula for the volume of a cuboid;
- Find the volume of a prism, including a triangular prism, cube and cuboid;
- Calculate volumes of right prisms and shapes made from cubes and cuboids;
- Estimate volumes etc by rounding measurements to 1 significant figure;
- Convert between metric volume measures;
- Convert between metric measures of volume and capacity e.g. 1ml = 1cm^3.

POSSIBLE SUCCESS CRITERIA

Justify whether a certain number of small boxes fit inside a larger box.
Calculate the volume of a triangular prism with correct units.

COMMON MISCONCEPTIONS

Volume often gets confused with surface area.

NOTES

Discuss the correct use of units.
Drawings should be done in pencil.
Consider 'how many small boxes fit in a larger box'-type questions.

Practical examples should be used to enable students to understand the difference between perimeter, area and volume.

Straight Line Graphs 9b – Equations of straight line graphs. Teaching time: 5-7 hours

OBJECTIVES

- By the end of the sub-unit, students should be able to:
- Use function machines to find coordinates (i.e. given the input x, find the output y);
- Plot and draw graphs of $y = a$, $x = a$, $y = x$ and $y = -x$;
- Recognise straight-line graphs parallel to the axes;
- Recognise that equations of the form $y = mx + c$ correspond to straight-line graphs in the coordinate plane;
- Plot and draw graphs of straight lines of the form $y = mx + c$ using a table of values;
- Sketch a graph of a linear function, using the gradient and y-intercept;
- Identify and interpret gradient from an equation $y = mx + c$;
- Identify parallel lines from their equations;
- Plot and draw graphs of straight lines in the form $ax + by = c$;
- Find the equation of a straight line from a graph;
- Find the equation of the line through one point with a given gradient;
- Find approximate solutions to a linear equation from a graph;
- Find the gradient of a straight line from real-life graphs too.

POSSIBLE SUCCESS CRITERIA

Plot and draw the graph for $y = 2x - 4$.

Which of these lines are parallel: $y = 2x + 3$, $y = 5x + 3$, $y = 2x - 9$, $2y = 4x - 8$

COMMON MISCONCEPTIONS

When not given a table of values, students rarely see the relationship between the coordinate axes.

NOTES

Emphasise the importance of drawing a table of values when not given one.

Values for a table should be taken from the x-axis.

Transformations 10b – Reflections and enlargements. Teaching time: 7-9 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Understand that reflections are specified by a mirror line;
- Identify correct reflections from a choice of diagrams;
- Understand that reflections are specified by a mirror line;
- Identify the equation of a line of symmetry;
- Transform 2D shapes using single reflections (including those not on coordinate grids) with vertical, horizontal and diagonal mirror lines;
- Describe reflections on a coordinate grid;
- Scale a shape on a grid (without a centre specified);
- Understand that an enlargement is specified by a centre and a scale factor;
- Enlarge a given shape using (0, 0) as the centre of enlargement, and enlarge shapes with a centre other than (0, 0);
- Find the centre of enlargement by drawing;
- Describe and transform 2D shapes using enlargements by:
  - a positive integer scale factor;
  - a fractional scale factor;
- Identify the scale factor of an enlargement of a shape as the ratio of the lengths of two corresponding sides, simple integer scale factors, or simple fractions;
- Understand that distances and angles are preserved under reflections, so that any figure is congruent under this transformation;
- Understand that similar shapes are enlargements of each other and angles are preserved – define similar in this unit;
- Describe and transform 2D shapes using combined rotations, reflections, translations, or enlargements.

POSSIBLE SUCCESS CRITERIA

Describe and transform a given shape by a reflection.
Convince me the scale factor is, for example, 2.5.

NOTES

Emphasise the need to describe the transformations fully and if asked to describe a 'single' transformation they should not include two types.
Students may need reminding about how to find the equations of straight lines, including those parallel to the axes.
When reflecting shapes, the students must include mirror lines on or through original shapes.
As an extension, consider reflections with the mirror line through the shape and enlargements with the centre of enlargement inside the shape.

NB enlargement using negative scale factors is not included.

Proportion 11b – Direct and inverse proportion. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Understand and use proportion as equality of ratios;
- Solve word problems involving direct and indirect proportion;
- Work out which product is the better buy;
- Scale up recipes;
- Convert between currencies;
- Find amounts for 3 people when amount for 1 given;
- Solve proportion problems using the unitary method;
- Recognise when values are in direct proportion by reference to the graph form;
- Understand inverse proportion: as x increases, y decreases (inverse graphs done in later unit);
- Recognise when values are in direct proportion by reference to the graph form;
- Understand direct proportion ---> relationship $y = kx$.

POSSIBLE SUCCESS CRITERIA

Recognise that two paints mixed red to yellow 5 : 4 and 20 : 16 are the same colour.
If it takes 2 builders 10 days to build a wall, how long will it take 3 builders?
Scale up recipes and decide if there is enough of each ingredient.
Given two sets of data in a table, are they in direct proportion?

NOTES

Find out/prove whether two variables are in direct proportion by plotting the graph and using it as a model to read off other values. Possible link with scatter graphs.

Right Angled Triangles 12 – Pythagoras and/or trigonometry. Teaching time: 5-7 hours

OBJECTIVES

By the end of the unit, students should be able to:

- Understand, recall and use Pythagoras' Theorem in 2D, including leaving answers in surd form;
- Given 3 sides of a triangle, justify if it is right-angled or not;
- Calculate the length of the hypotenuse in a right-angled triangle, including decimal lengths and a range of units;
- Find the length of a shorter side in a right-angled triangle;
- Apply Pythagoras' Theorem with a triangle drawn on a coordinate grid;
- Calculate the length of a line segment AB given pairs of points;
- Understand, use and recall the trigonometric ratios sine, cosine and tan, and apply them to find angles and lengths in general triangles in 2D figures;
- Use the trigonometric ratios to solve 2D problems;
- Find angles of elevation and depression;
- Round answers to appropriate degree of accuracy, either to a given number of significant figures or decimal places, or make a sensible decision on rounding in context of question;
- Know the exact values of sin θ and cos θ for θ = 0°, 30°, 45°, 60° and 90°; know the exact value of tan θ for θ = 0°, 30°, 45° and 60°.

POSSIBLE SUCCESS CRITERIA

Does 2, 3, 6 give a right angled triangle?

Justify when to use Pythagoras' Theorem and when to use trigonometry.

COMMON MISCONCEPTIONS

Answers may be displayed on a calculator in surd form.

Students forget to square root their final answer or round their answer prematurely.

NOTES

Students may need reminding about surds.

Drawing the squares on the 3 sides will help to illustrate the theorem.

Include examples with triangles drawn in all four quadrants.

Scale drawings are not acceptable.

Calculators need to be in degree mode.

To find in right-angled triangles the exact values of sin θ and cos θ for θ = 0°, 30°, 45°, 60° and 90°, use triangles with angles of 30°, 45° and 60°.

Use a suitable mnemonic to remember SOHCAHTOA.

Use Pythagoras' Theorem and trigonometry together.

Note: some groups may only consolidate Pythagoras in this time, whilst some may only focus on trigonometry, or any combination of.

Probability 13b – Probability 2. Teaching time: 8-10 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Find the probability of an event happening using relative frequency;
- Estimate the number of times an event will occur, given the probability and the number of trials – for both experimental and theoretical probabilities;
- List all outcomes for combined events systematically;
- Use and draw sample space diagrams;
- Work out probabilities from Venn diagrams to represent real-life situations and also 'abstract' sets of numbers/values;
- Use union and intersection notation;
- Compare experimental data and theoretical probabilities;
- Compare relative frequencies from samples of different sizes;
- Find the probability of successive events, such as several throws of a single dice;
- Use tree diagrams to calculate the probability of two independent events;
- Use tree diagrams to calculate the probability of two dependent events.

POSSIBLE SUCCESS CRITERIA

Understand the use of the 0–1 scale to measure probability.
List all the outcomes for an experiment.
Know and apply the fact that the sum of probabilities for all outcomes is 1.
Draw a Venn diagram of students studying French, German or both, and then calculate the probability that a student studies French given that they also study German.

COMMON MISCONCEPTIONS

Not using fractions or decimals when working with probability trees.

NOTES

Probability without replacement is best illustrated visually and by initially working out probability 'with' replacement.
Encourage students to work 'across' the branches working out the probability of each successive event. The probability of the combinations of outcomes should = 1.
Emphasise that were an experiment repeated it will usually lead to different outcomes, and that increasing sample size generally leads to better estimates of probability and population characteristics.
Probabilities written in fraction form should be cancelled to their simplest form.

Constructions, Loci and Bearings 15b. Teaching time: 9-11 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Understand congruence, as two shapes that are the same size and shape;
- Visually identify shapes which are congruent;
- Use straight edge and a pair of compasses to do standard constructions:
  - understand, from the experience of constructing them, that triangles satisfying SSS, SAS, ASA and RHS are unique, but SSA triangles are not;
  - construct the perpendicular bisector of a given line;
  - construct the perpendicular from a point to a line;
  - construct the bisector of a given angle;
  - construct angles of 90°, 45°;
- Draw and construct diagrams from given instructions, including the following:
  - a region bounded by a circle and an intersecting line;
  - a given distance from a point and a given distance from a line;
  - equal distances from two points or two line segments;
  - regions may be defined by 'nearer to' or 'greater than';
- Find and describe regions satisfying a combination of loci;
- Use constructions to solve loci problems (2D only);
- Use and interpret maps and scale drawings;
- Estimate lengths using a scale diagram;
- Make an accurate scale drawing from a diagram;
- Use three-figure bearings to specify direction;
- Mark on a diagram the position of point B given its bearing from point A;
- Give a bearing between the points on a map or scaled plan;
- Given the bearing of a point A from point B, work out the bearing of B from A;
- Use accurate drawing to solve bearings problems;
- Solve locus problems including bearings.

POSSIBLE SUCCESS CRITERIA

Sketch the locus of point on a vertex of a rotating shape as it moves along a line, i.e. a point on the circumference or at the centre of a wheel.

COMMON MISCONCEPTIONS

Correct use of a protractor may be an issue.

NOTES

Drawings should be done in pencil.
Relate loci problems to real-life scenarios, including mobile phone masts and coverage.
Construction lines should not be erased.

Quadratic Equations 16a – Expanding and factorising. Teaching time: 4-6 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Define a 'quadratic' expression;
- Multiply together two algebraic expressions with brackets;
- Square a linear expression, e.g. $(x + 1)^2$;
- Factorise quadratic expressions of the form $x^2 + bx + c$;
- Factorise a quadratic expression $x^2 - a^2$ using the difference of two squares;
- Solve quadratic equations by factorising;
- Find the roots of a quadratic function algebraically.

POSSIBLE SUCCESS CRITERIA

Solve $3x^2 + 4 = 100$.
Expand $(x + 2)(x + 6)$.
Factorise $x^2 + 7x + 10$.
Solve $x^2 + 7x + 10 = 0$.
Solve $(x - 3)(x + 4) = 0$.

COMMON MISCONCEPTIONS

x terms can sometimes be 'collected' with x^2.

NOTES

This unit can be extended by including quadratics where $a \neq 1$.
Emphasise the fact that x^2 and x are different 'types' of term – illustrate this with numbers.

Fractions and Reciprocals 18a – Basic operations. Teaching time: 4-6 hours

OBJECTIVES By the end of the sub-unit, students should be able to: • Add and subtract mixed number fractions; • Multiply mixed number fractions; • Divide mixed numbers by whole numbers and vice versa; • Find the reciprocal of an integer, decimal or fraction; • Understand 'reciprocal' as multiplicative inverse, knowing that any non-zero number multiplied by its reciprocal is 1 (and that zero has no reciprocal because division by zero is not defined).	**POSSIBLE SUCCESS CRITERIA** What is the reciprocal of 4, $\frac{1}{2}$, –2, $-\frac{1}{2}$? **COMMON MISCONCEPTIONS** The larger the denominator the larger the fraction. **NOTES** Regular revision of fractions is essential. Demonstrate how to the use the fraction button on the calculator. Use real-life examples where possible.

Indices and Standard Form 18b – Manipulation and uses. Teaching time: 5-7 hours

OBJECTIVES

By the end of the sub-unit, students should be able to:

- Use index laws to simplify and calculate the value of numerical expressions involving multiplication and division of integer powers, fractions and powers of a power;
- Use numbers raised to the power zero, including the zero power of 10;
- Convert large and small numbers into standard form and vice versa;
- Add and subtract numbers in standard form;
- Multiply and divide numbers in standard form;
- Interpret a calculator display using standard form and know how to enter numbers in standard form.

POSSIBLE SUCCESS CRITERIA

Write 51 080 in standard form.
Write 3.74×10^{-6} as an ordinary number.
What is 9^0?

COMMON MISCONCEPTIONS

Some students may think that any number multiplied by a power of ten qualifies as a number written in standard form.
When rounding to significant figures some students may think, for example, that 6729 rounded to one significant figure is 7.

NOTES

Negative fractional indices are not included at Foundation tier, but you may wish to extend the work to include these.
Standard form is used in science and there are lots of cross curricular opportunities.

Students need to be provided with plenty of practice in using standard form with calculators.