

CTA Y10 L (CROSSOVER) UNIT 1: POWERS

1.1	Negative powers	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-negative-and-zero-exponents/overview [This lesson also includes power 0]
1.2	Index laws	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-multiplication/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-division/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-raising-a-power-to-a-power/overview
1.3	Power 0	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-negative-and-zero-exponents/overview [This lesson also includes negative powers]
1.4	Use a combination of index laws	
1.5	Multiply and divide algebraic involving powers and multiple variables	
1.6	Fraction powers	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/the-laws-of-indices-fractional-exponents/overview

CTA Y10 L (CROSSOVER) UNIT 2: RATIO & SCALE

2.1	Simplify a ratio, including with different units	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/ratio/lessons/checking-and-securing-understanding-of-simplifying-and-unitising-ratios/overview
2.2	Divide in a ratio	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/ratio/lessons/checking-and-securing-understanding-of-sharing-in-a-ratio/overview
2.3	Combined ratio	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/ratio/lessons/combining-ratios/overview
2.4	Scale diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/bearings/lessons
2.5	Bearings	[Set of 6 lessons on bearings and scale diagrams]

CTA Y10 L (CROSSOVER) UNIT 3: BRACKETS

3.1	Prove identities	
3.2	Expand a 'triple bracket'	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/the-product-of-three-binomials/overview
3.3	Factorise into a single bracket	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/algebraic-manipulation/lessons/checking-and-securing-understanding-of-factorising/overview
3.4	Simplify an algebraic fraction (by factorising into a single bracket)	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/algebraic-fractions/lessons/simplifying-algebraic-fractions/overview [Stop the video at 9:35 and ignore question 4 onwards in the Exit Quiz]
3.5	Factorise a quadratic expression (x^2)	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/factorising-a-quadratic-expression/overview
3.6	Factorise a quadratic expression ($2x^2$, $3x^2$, etc.)	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/factorising-quadratics-of-the-form-ax-2-plus-bx-plus-c/overview
3.7	Factorise a 'difference of two squares'	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/factorising-using-the-difference-of-two-squares/overview

CTA Y10 L (CROSSOVER) UNIT 4: AREA & PERIMETER

4.1	Area of a trapezium Area of a compound shape	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/2d-and-3d-shape-compound-shapes/lessons/checking-and-securing-understanding-of-area-for-standard-shapes/overview [This lesson includes area of a trapezium] https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/2d-and-3d-shape-compound-shapes/lessons/checking-and-securing-understanding-of-area-for-compound-shapes/overview
4.2	Area/perimeter problems involving more than one shape	
4.3	Form and solve an equation in the context of area or perimeter	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/checking-and-securing-understanding-of-forming-linear-equations/overview [This lesson also includes some other contexts for forming and solving equations.]
4.4	Use brackets in the context of area or perimeter	
4.5	Parts of a circle	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/circle-theorems/lessons/checking-and-securing-understanding-of-the-parts-of-a-circle/overview
4.6	Calculate the area, arc length or perimeter of a sector	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/2d-and-3d-shape-compound-shapes/lessons/calculating-arc-length/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/2d-and-3d-shape-compound-shapes/lessons/area-of-a-sector/overview
4.7	Calculate the angle or radius of a sector	
4.8	Use the area of a sector to calculate the perimeter (or arc length) and vice versa	

CTA Y10 L (CROSSOVER) UNIT 5: EQUATIONS

5.1	Solve a quadratic equation by factorising (x^2)	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/solving-quadratic-equations-by-factorising/overview
5.2	Quadratic Formula	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/solving-quadratic-equations-by-using-the-formula/overview
5.3	Solve simultaneous equations using a graph	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-simultaneous-linear-equations-graphically/overview
5.4	Solve simultaneous equations using algebra (by 'elimination')	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-algebraic-simultaneous-equations-by-elimination/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-more-complex-simultaneous-equations-by-elimination/overview
5.5	Solve a problem using simultaneous equations	

CTA Y10 L (CROSSOVER) UNIT 6: VOLUME

6.1	Volume of cuboids, prisms and cylinders	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/checking-and-securing-understanding-of-volume-of-prisms/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/checking-and-securing-understanding-of-volume-of-a-cylinder/overview
6.2	Volume of spheres, cones and pyramids	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/the-volume-of-a-pyramid/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/the-volume-of-a-sphere/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/the-volume-of-a-cone/overview
6.3	Context problems involving the volume of solids Form and solve equations involving volume	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/volume-of-composite-solids/overview [This lesson is on composite solids]
6.4	Use algebra in volume problems	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/2d-and-3d-shape-surface-area-and-volume-pyramids-spheres-and-cones/lessons/forming-equations-involving-complex-shape-calculations/video [This lesson also includes surface area]

CTA Y10 L (CROSSOVER) UNIT 7: FRACTIONS

7.1	Convert a fraction to a recurring decimal	
7.2	Convert a recurring decimal to a fraction	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/arithmetic-procedures-index-laws/lessons/converting-any-recurring-decimal-to-a-fraction/overview
7.3	Order fractions	https://www.thenational.academy/pupils/programmes/mathss-primary-year-6/units/comparing-fractions/lessons/order-sets-of-non-related-fractions-using-a-range-of-strategies/overview
7.4	Order a combination of fractions, decimals and percentages	
7.5	Algebraic fractions: add, subtract, multiply, divide	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/algebraic-fractions/lessons/operations-with-algebraic-fractions/overview
7.6	Multiply/divide more complex algebraic fractions	
7.7	Increase/decrease by a fraction	
7.8	Repeated fraction change	

CTA Y10 L (CROSSOVER) UNIT 8: ANGLES

8.1	Angles on parallel lines	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/angles/lessons/checking-and-securing-understanding-of-advanced-angle-facts/overview
8.2	Angles in polygons	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/angles/lessons/checking-and-securing-understanding-of-polygons/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/angles/lessons/checking-and-securing-understanding-of-interior-angles/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/angles/lessons/checking-and-securing-understanding-of-exterior-angles/overview
8.3	Form and solve an equation in the context of angles	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/angles/lessons/forming-equations-with-angles/overview

CTA Y10 L (CROSSOVER) UNIT 9: LINEAR GRAPHS

9.1	Plot a line graph of the form $y = mx + c$, using a table of values Decide whether a point would lie on a particular line	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/linear-graphs/lessons/checking-and-securing-understanding-of-drawing-linear-graphs/overview
9.2	Plot a line graph which is defined implicitly e.g. $3x + 4y = 12$	
9.3	Solve a linear equation using a graph	
9.4	Find the equation of a line using one point and its gradient Find the equation of a line using one point and the equation of a line which is parallel	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/linear-graphs/lessons/checking-and-securing-understanding-of-finding-the-equation-of-the-line-from-coordinates/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/linear-graphs/lessons/parallel-linear-graphs/overview

CTA Y10 L (CROSSOVER) UNIT 10: INEQUALITIES

10.1	Inequalities on number lines	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/inequalities/lessons/inequalities-on-number-lines/overview
10.2	Solve inequality with a negative term in the unknown (e.g. $40 - 2x < 32$)	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/inequalities/lessons/solving-simple-linear-inequalities/overview
10.3	Solve inequality with the unknown on both sides	
10.4	Solve 3-part inequalities	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/inequalities/lessons/solving-more-complicated-linear-inequalities/overview
10.5	Single inequalities on graphs	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/inequalities/lessons/solving-a-linear-inequality-graphically/overview
10.6	Multiple inequalities on graphs	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/inequalities/lessons/solving-a-set-of-linear-inequalities-graphically/overview
10.7	Identify inequalities from a shaded graph	

CTA Y10 L (CROSSOVER) UNIT 11: STATISTICS 1

11.1	Criticise a data collection method	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/sampling/lessons/data-collection/overview
11.2	Find values that produce a combination of statistics (mean, median, mode, range) Understand why the median is often a more reliable measure of average than the mean	
11.3	Mean and total from an ungrouped frequency table Estimate mean and total from a grouped frequency table and understand why this is only an estimate	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/comparisons-of-numerical-summaries-of-data/lessons/calculating-the-mean-from-a-grouped-frequency-table/overview
11.4	Mode from an ungrouped frequency table Modal class from a grouped frequency table	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/comparisons-of-numerical-summaries-of-data/lessons/calculating-summary-statistics-from-a-grouped-frequency-table/video
11.5	Range from an ungrouped frequency table Estimate the range from a grouped frequency table	
11.6	Scatter diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/graphical-representations-of-data-scatter-graphs-and-time-series/lessons/checking-understanding-of-scatter-graphs/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/graphical-representations-of-data-scatter-graphs-and-time-series/lessons/checking-understanding-of-correlation/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/graphical-representations-of-data-scatter-graphs-and-time-series/lessons/estimating-from-scatter-graphs/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/graphical-representations-of-data-scatter-graphs-and-time-series/lessons/interpolation-versus-extrapolation/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/graphical-representations-of-data-scatter-graphs-and-time-series/lessons/outliers-in-scatter-graphs/overview

CTA Y10 L (CROSSOVER) UNIT 12: FORMULAE & FUNCTIONS

12.1	Substitute positive and negative numbers into formulae	
12.2	Multiply decimals Substitute decimals into formulae	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-7/units/arithmetic-procedures-with-integers-and-decimals/lessons/multiplying-with-decimals/overview [This lesson is on multiplying decimals]
12.3	Add, subtract, multiply and divide fractions Substitute fractions into formulae	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-7/units/arithmetic-procedures-with-fractions/lessons/securing-understanding-of-addition-and-subtraction-with-fractions/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-7/units/arithmetic-procedures-with-fractions/lessons/securing-understanding-of-multiplication-with-fractions/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-7/units/arithmetic-procedures-with-fractions/lessons/dividing-a-fraction-by-a-fraction/overview
12.4	Function notation: find outputs	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/functions-and-proof/lessons/defining-function-notation/overview
12.5	Change the subject of a formula	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-9/units/expressions-and-formulae/lessons/changing-the-subject-with-simple-formula/overview
12.6	Change the subject of formulas involving 3+ steps, small powers and small roots	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/algebraic-manipulation/lessons/checking-and-securing-understanding-of-changing-the-subject/overview [Ignore the examples using cos, sin or tan functions]

CTA Y10 L (CROSSOVER) UNIT 13: BASIC TRIGONOMETRY

13.1	Pythagoras' theorem: calculate missing sides	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/checking-and-further-securing-understanding-of-pythagoras-theorem/overview
13.2	Pythagoras' theorem: decide whether a triangle is right-angled	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/using-pythagoras-theorem-to-justify-a-right-angled-triangle/overview
13.3	Pythagoras' theorem: 3D problems	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/applying-pythagoras-theorem-in-3d/overview
13.4	Sin/cos/tan: missing sides	<ul style="list-style-type: none"> https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/checking-and-securing-understanding-of-sine-ratio-problems/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/checking-and-securing-understanding-of-cosine-problems/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/checking-and-securing-understanding-of-tangent-ratio-problems/overview
13.5	Sin/cos/tan: missing angles	
13.6	Problems involving right-angled triangles	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/right-angled-trigonometry/lessons/advanced-problem-solving-with-right-angled-trigonometry/overview

CTA Y10 L (CROSSOVER) UNIT 14: NUMBER

14.1	Use a calculator for complex calculations	
14.2	Find LCM and HCF using prime factors	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/arithmetic-procedures-index-laws/lessons/checking-and-securing-understanding-of-prime-factorisation/overview
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-foundation/units/arithmetic-procedures-index-laws/lessons/checking-and-securing-understanding-of-lcm-and-hcf/overview
14.3	Solve problems involving HCF and LCM	
14.4	Divide by a decimal Estimate when dividing by a decimal	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-7/units/arithmetic-procedures-with-integers-and-decimals/lessons/dividing-with-decimals/video
14.5	Estimate with powers and roots Decide whether an estimate is an over-estimate or under-estimate	
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-8/units/estimation-and-rounding/lessons/overestimating-vs-underestimating/overview
14.6	Upper and lower bounds Error intervals	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/rounding-estimation-and-bounds/lessons/upper-and-lower-bounds/overview
14.7	Problems involving bounds	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/rounding-estimation-and-bounds/lessons/upper-and-lower-bounds-in-additive-calculations/overview
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/rounding-estimation-and-bounds/lessons/upper-and-lower-bounds-in-multiplicative-calculations/overview
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/rounding-estimation-and-bounds/lessons/using-upper-and-lower-bounds-practically/overview
14.8	Truncate a decimal	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-8/units/estimation-and-rounding/lessons/truncating/video
14.9	Error interval for a truncated number	
14.10	Problems involving decimals	

CTA Y10 L (CROSSOVER) UNIT 15: NON-LINEAR GRAPHS

15.1	Plot a quadratic graph, using a table of values Know the shape of a quadratic graph Roots and turning point from a quadratic graph	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/non-linear-graphs/lessons/checking-and-securing-understanding-of-drawing-quadratic-graphs/overview
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/non-linear-graphs/lessons/key-features-of-a-quadratic-graph/overview
15.2	Solve a quadratic equation using a graph	
15.5	Graph of a non-standard function	

CTA Y10 L (CROSSOVER) UNIT 16: COMPOUND UNITS

16.1	Speed/distance/time	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/compound-measures/lessons/compound-measures-for-speed/overview
16.2	Distance-time graphs	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/real-life-graphs/lessons/checking-and-securing-understanding-of-drawing-distance-time-graphs/overview
		https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/real-life-graphs/lessons/distance-time-graphs/overview
16.3	Density	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/compound-measures/lessons/compound-measures-for-density/overview

CTA Y10 L (CROSSOVER) UNIT 17: PROPORTION

17.1	Direct proportion word problems	
17.2	Rates of pay	
17.3	Population density	
17.4	Other rates and rates of change	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-foundation/units/compound-measures/lessons/problem-solving-with-compound-measures/overview
17.5	Direct proportion: graphs, tables, expressions, formulas	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/linear-graphs/lessons/checking-and-understanding-graphs-showing-direct-proportion/overview [This lesson covers graphs showing direct proportion]
17.6	Construct and use direct proportion formulas	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/direct-and-inverse-proportion/lessons/finding-the-constant-of-proportionality-for-direct-proportion/video
17.7	Inverse proportion word problems	
17.8	Construct and use inverse proportion formulas	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/direct-and-inverse-proportion/lessons/finding-the-constant-of-proportionality-for-inverse-proportion/overview [This lesson also includes more complex formulas]
17.9	Inverse proportion: graphs, tables, expressions, formulas	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/direct-and-inverse-proportion/lessons/checking-and-securing-understanding-of-inverse-proportion-graphs/overview [This lesson covers graphs showing inverse proportion]

CTA Y10 L (CROSSOVER) UNIT 18: PERCENTAGE

18.1	Compare quantities using percentages	
18.2	Find the percentage of a change, profit or loss	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-8/units/understanding-multiplicative-relationships-percentages-and-proportionality/lessons/finding-the-percentage-change/overview
18.3	Reverse percentage	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-8/units/understanding-multiplicative-relationships-percentages-and-proportionality/lessons/finding-the-original-amount-after-an-increase/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-8/units/understanding-multiplicative-relationships-percentages-and-proportionality/lessons/finding-the-original-amount-after-a-decrease/overview
18.4	Repeated percentage change, including simple and compound interest	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/percentages/lessons/simple-and-compound-interest/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/percentages/lessons/simple-interest-calculations/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/percentages/lessons/compound-interest-calculations/overview

CTA Y10 L (CROSSOVER) UNIT 19: ADVANCED TRIGONOMETRY

19.1	The Sine Rule: missing sides	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/non-right-angled-trigonometry/lessons/the-sine-rule/overview
19.2	The Sine Rule: missing angles	
19.3	The Cosine Rule: missing sides	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/non-right-angled-trigonometry/lessons/the-cosine-rule/overview
19.4	The Cosine Rule: missing angles	
19.5	Problems involving non-right-angled triangles	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/non-right-angled-trigonometry/lessons/using-the-sine-and-cosine-rules/overview

CTA Y10 L (CROSSOVER) UNIT 20: STATISTICS 2

20.1	Using a sample	
20.2	Frequency polygons	
20.3	Misleading diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-9/units/thinking-critically-with-maths/lessons/misleading-data/overview
20.4	Construct stem and leaf diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/comparisons-of-numerical-summaries-of-data/lessons/constructing-stem-and-leaf-diagrams/overview
20.5	Interpret stem and leaf diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-10-higher/units/comparisons-of-numerical-summaries-of-data/lessons/calculating-summary-statistics-from-stem-and-leaf-diagrams/overview

CTA Y10 L (CROSSOVER) UNIT 21: SEQUENCES & PROOF

21.1	Proofs involving odd and even numbers	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/functions-and-proof/lessons/writing-a-proof/overview
21.2	Use algebra in sequences, including Fibonacci-type sequences	
21.3	Nth term of a (linear) sequence	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/further-sequences/lessons/checking-and-securing-rules-for-generating-arithmetic-sequences/overview

CTA Y10 L (CROSSOVER) UNIT 22: VECTORS

22.1	Vectors on a grid	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/vectors/lessons/column-vectors/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/vectors/lessons/algebraic-vector-notation/overview
22.2	Add column vectors, showing this on a grid	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/vectors/lessons/addition-with-vectors/overview
22.3	Subtract column vectors	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/vectors/lessons/subtraction-with-vectors/overview
22.4	Multiply a column vector by a number	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/vectors/lessons/multiplication-with-vectors/overview
22.5	Identify vectors in a diagram, including with midpoints	

CTA Y10 L (CROSSOVER) UNIT 23: PROBABILITY

23.1	Use a probability to identify a total	
23.2	Find a missing probability in a table	
23.3	Experimental probability and relative frequency	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/conditional-probability/lessons/experimental-probability/overview https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-foundation/units/conditional-probability/lessons/experimental-vs-theoretical-probability/video
23.4	Expectation	
23.5	Probability tree diagrams	https://www.thenational.academy/pupils/programmes/mathss-secondary-year-9/units/probability-theoretical-probabilities/lessons/calculating-theoretical-probabilities-from-probability-trees-two-events/video https://www.thenational.academy/pupils/programmes/mathss-secondary-year-11-higher/units/conditional-probability/lessons/conditional-probability-in-a-tree-diagram/overview