


S2 CfE Course A (Algebra focus) : August - October

Topic	Content	CfE	Website Links
Number Sequences	Next three numbers	MTH 3-13a	https://www.bbc.co.uk/bitesize/topics/zwg4d2p/articles/zf4sv9q https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/5
Generalise (finding n^{th} term)	Finding pattern/formula n^{th} terms	MTH 3-13a MTH 4-13a	https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/6
Generalising from diagram	From pictorial pattern to n^{th} term	MTH 3-15b MTH 4-13a	https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/7
Like Terms	Adding, subtracting like algebraic terms	MTH 3-14a	https://www.bbc.co.uk/bitesize/topics/z9yb4wx/articles/zkvxh39 https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/3
Writing Expressions	From a written context or diagram producing an algebraic expression	MTH 3-15a	https://www.bbc.co.uk/bitesize/topics/z9yb4wx/articles/zj8sv9q
Expanding One Bracket	$3(x + 2) - 2(7 - x)$ $= 3x + 6 = -14 + 2x$	MTH 4-14a	https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/1
Expand & Simplify	$3(x - 4) + 7$ $3(y - 4) - 2(5 - y)$	MTH 4-14a	https://www.bbc.co.uk/bitesize/guides/z2yg87h/revision/1
Factorise One Bracket	$3x^2 - 9x = 3x(x - 3)$	MTH 4-14b	https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/2
Equations	Solving equations like: $3x = 12$ $3x - 4 = 18$ $\frac{1}{5}x = 5$	MTH 3-15a	https://www.bbc.co.uk/bitesize/guides/zt8sgk7/revision/3
Equations with Brackets	Solving equations like: $2(2x + 3) = 18$	MTH 3-15a MTH 4-14a	https://www.bbc.co.uk/bitesize/guides/zwgdb82/revision/2

Substitution (easier)	Replacing the letter with the corresponding value and evaluating: Find $2a - b$ when $a = 2, b = 3$	MTH 3-14a	https://www.bbc.co.uk/bitesize/guides/zx9p34j/revision/4 https://www.mathsisfun.com/algebra/substitution.html
Writing equations	Converting statements in context into Mathematical language.	MTH 3-15a	https://www.bbc.co.uk/bitesize/guides/z36vcj6/revision/3 https://www.mathsisfun.com/algebra/word-questions-solving.html
Expanding Two Brackets	Using the method of FOIL to expand $(x - 2)(x + 9)$ and $(x - 5)^2$	MTH 4-14a	https://www.bbc.co.uk/bitesize/guides/z2yg87h/revision/2
Harder Equations	Solving equations incl: $2x - 4 = 2(x + 9)$ $3(5x - 3) + 5(x - 1) = 2x$ $\frac{4}{5}x - 2 = \frac{1}{3}x + 5$	MTH 4-15a	https://www.bbc.co.uk/bitesize/guides/zbybkqt/revision/3
Substitution (hard)	Evaluating expressions such as: Find $12b + (a - c)^2$ when $a = -1, b = 2, c = -3$	MTH 3-14a	https://www.bbc.co.uk/bitesize/guides/z36vcj6/revision/2
Changing the Subject	Re-arranging algebraically. For example (for x): $y = 2x - 4$ $E = mx^2$ $F = \frac{9}{5}C + 32$	MTH 4- 15a MTH 4-03b	https://www.bbc.co.uk/bitesize/guides/zt8sgk7/revision/5 https://www.bbc.co.uk/bitesize/guides/zx2n7p3/revision/1
Simultaneous Equations	Specifically focus on solving algebraically & primarily by the method of elimination. $2x - y = 12$ $3x + y = 21$	MTH 4- 15a extension	https://www.bbc.co.uk/bitesize/guides/z8gdb82/revision/1 https://www.bbc.co.uk/bitesize/guides/z9y9jty/revision/1
Indices	$a^m \times a^n = a^{m+n}$ $a^m \div a^n = a^{m-n}$ $(a^m)^n = a^{mn}$	MTH 4-06a MTH 4-06b	https://www.bbc.co.uk/bitesize/guides/zqtv6yc/revision/1
November Algebra Assessment			

S2 CfE Course A (Pythagoras, SDT, Circle) : November/December

Topic	Content	CfE	Links
Circle	<p>Circumference of a circle $C = \pi d$ including revolutions</p> <p>Area of a circle $A = \pi r^2$</p>	<p>MTH 4-16b MNU 3-11a</p>	<p>https://www.bbc.co.uk/bitesize/guides/z2ctyrd/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zt6vcj6/revision/1</p>
Distance, Speed & Time Calculating time intervals	<p>Calculating one, given the other two</p>  <p>Speed/Time Graphs</p> <p>Time interval over midnight or midday on 12hr clock Changing decimal ↔ actual time</p>	<p>MNU 3-10a MNU 4-10b</p>	<p>https://www.bbc.co.uk/bitesize/topics/zj48q6f/articles/z8k83k7</p> <p>https://www.bbc.co.uk/bitesize/guides/z4swxnb/revision/1</p> <p>https://www.bbc.co.uk/bitesize/clips/zwyykqt</p> <p>https://www.mathsisfun.com/time-add-subtract.html</p>
Pythagoras Theorem	<p>Theorem of Pythagoras</p> <p>Converse of Pythagoras</p>	<p>MTH 4-16a extension</p>	<p>https://www.bbc.co.uk/bitesize/guides/z6knb9q/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zq8x8mn/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zq8x8mn/revision/6</p>
December Pythagoras, SDT, Circle Assessment and Extension Assessment			

S2 CfE Course A (Factorising, Surds, Fractions, Line Graphs) : January/February

Topic	Content	CfE	Links
Factorising	<p>Difference of Squares $x^2 - 64$ $= (x - 8)(x + 8)$</p> <p>Trinomials $x^2 - 4x - 24$ $= (x - 6)(x + 4)$</p> <p>Process of Factorising:</p> <ul style="list-style-type: none"> • Common factors • Difference of squares • Trinomials <p>$3x^2 - 27$ $= 3(x - 3)(x + 3)$</p>	Extension of MTH 4- 14b	https://www.bbc.co.uk/bitesize/guides/zmvrd2p/revision/2 https://www.mathsisfun.com/algebra/factoring.html
Surds	<p>Simplifying Surds $\sqrt{24} = \sqrt{4}\sqrt{6} = 2\sqrt{6}$</p> <p>Addition & Subtraction $3\sqrt{5} + 7\sqrt{5} = 10\sqrt{5}$</p> <p>Multiplication & Division $\sqrt{a} \times \sqrt{b} = \sqrt{ab}$ $\frac{\sqrt{a}}{\sqrt{b}} = \sqrt{\frac{a}{b}}$</p>	Extension of MTH 4- 06a	https://www.bbc.co.uk/bitesize/guides/z9jtw6f/revision/1 https://www.mathsisfun.com/numbers/simplify-square-roots.html
Fractions	<p>Mixed no. \leftrightarrow Improper Frac</p> <p>Addition, Subtraction, Multiplication & Division of fractions</p>	<p>MTH 3-07c</p> <p>MTH 3-07b MTH 4-07b</p>	https://www.bbc.co.uk/bitesize/guides/zrp82hv/revision/1 https://www.bbc.co.uk/bitesize/guides/z2b83k7/revision/1
Line Graphs	Drawing Linear Graphs from a table of values.	MTH 4-13d	https://www.bbc.co.uk/bitesize/guides/zt8sgk7/revision/1

February Assessment

S2 CfE Course A (Area & Volume, Similarity, Integers, Trig) : March - May

Topic	Content	CfE	Links
Area & Volume	<p>Area of any triangle, Kite, Rhombus, Parallelogram, Trapezium and composite shapes.</p> <p>Surface Area and Volume of cube, cuboid, cylinder, triangular prism.</p> <p>Volume of a cone and sphere.</p> <p>Circle including arcs and sectors</p>	<p>MTH 3-11b</p> <p>MTH 4-11b</p> <p>MTH 4-11c</p> <p>MTH 4-16b</p>	<p>https://www.bbc.co.uk/bitesize/guides/z2ctyrd/revision/3</p> <p>https://www.bbc.co.uk/bitesize/topics/zrf3cdm</p> <p>https://www.bbc.co.uk/bitesize/guides/z9bdb82/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zwcqcj6/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zt6vcj6/revision/5</p>
Algebra Revision	<p>Expanding brackets.</p> <p>Factorising expressions: Common factor</p> <p>Difference of two squares</p>	<p>MTH 4-14a</p> <p>MTH 4-14b extension</p>	<p>https://www.bbc.co.uk/bitesize/guides/zmvr2p/revision/1</p>
Probability	<p>Probability is a measure of chance between 0 and 1. State the probability of an outcome and apply it.</p> <p>Definition:</p> $\frac{\text{no. of favourable outcomes}}{\text{total no. of outcomes}}$ <p>Emphasise decimal form for comparing/explaining</p>	<p>MNU 3-22a</p> <p>MNU 4-22a</p>	<p>https://www.bbc.co.uk/bitesize/guides/zm4hvcw/revision/10</p> <p>https://www.bbc.co.uk/bitesize/guides/zkyqtfr/revision/1</p> <p>https://www.mathsisfun.com/data/probability.html</p>

Statistics	<p>Interpret and construct stem & leaf charts.</p> <p>Frequency tables</p> <p>Mean, median and mode.</p> <p>Constructing and extracting data from bar charts, line graphs, pie charts and scatter graphs</p> <p>Quartiles and semi-interquartile range.</p> <p>Construct/extract data from a box plot.</p>	<p>MTH 4-20b</p> <p>MTH 4-21a</p> <p>MTH 3-21a</p> <p>MTH 4-21a</p>	<p>https://www.mathsisfun.com/data/stem-leaf-plots.html</p> <p>https://www.bbc.co.uk/bitesize/guides/zm4hvcw/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/znjv4wx/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/z94297h/revision/1</p> <p>https://www.mathsisfun.com/data/quartiles.html</p>
Algebra	<p>Equations - Integer values</p> <p>- Brackets</p> <p>Expanding trinomial expressions</p> <p>Equations with brackets</p> <p>Completing the Square</p>	<p>MTH 3-15a</p> <p>MTH 4-14a</p> <p>MTH 3-15a</p>	<p>https://www.bbc.co.uk/bitesize/guides/z2yg87h/revision/2</p> <p>Completing the Square (transum.org)</p>
Trig 1	<p>Right-angled triangles using Sine, Cosine and Tangent.</p>	<p>MTH 4-16a</p>	<p>https://www.bbc.co.uk/bitesize/guides/zsq39j6/revision/1</p>
End of Year Assessment			

S2 CfE Course A : June

Topic	Content	CfE	Links
Similarity	Ratio of sides of similar triangles.	MTH 4-17b	https://www.bbc.co.uk/bitesize/guides/zxmfmsg/revision/1
Integers	Four operations	MNU 3-04a	https://www.bbc.co.uk/bitesize/guides/z364jxs/revision/1
Use of index notation.	a^n , $n \in \mathbb{N}$, eg find 2^5 Scientific notation.	MTH 4-06a MTH 4-06b	https://www.bbc.co.uk/bitesize/guides/z66p34j/revision/4 https://www.bbc.co.uk/bitesize/guides/z8scdxs/revision/1