**Walton High School Hub Curriculum** 

**Year 11 – MATHS HIGHER**

**Half term 1 (September 2025 – October 2025)**

How it works:

1. In the table, find the correct week by looking at the date in the first column.
2. Find today’s work – there are three links per double lesson so you won’t run out of work!
3. Choose a lesson – hold ctrl and click on the chosen link.

**If the link does not work, you do not recognise the work or the work is too difficult, try another lesson.**

1. Some lessons have links to PowerPoints and other resources beneath the video and/or Starter Quiz.
2. Complete any starter quizzes.
	1. Write your answer down
	2. Mark your answers and write down any corrections, using the videos.
3. Watch the videos and take notes.
4. Pause if/when instructed to do so to answer questions or respond.
5. When the lesson is complete, go onto the next one.

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| Week commencing | Day | TOPIC | Lesson 1 | Lesson 2 |
| 01/09/25 | Monday | Proof, fractions, simultaneous equations  |  |  |
| Tuesday | [Write the sum of two algebraic fractions where the denominator is an expression |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/further-algebraic-fractions-2758/lessons/write-the-sum-of-two-algebraic-fractions-where-the-denominator-is-an-expression-6ru3ac/overview)  | [Write the difference of two algebraic fractions where the denominator is an expression |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/further-algebraic-fractions-2758/lessons/write-the-difference-of-two-algebraic-fractions-where-the-denominator-is-an-expression-61h64r/overview)  |
| Wednesday | [Solve algebraic fraction equations |)](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/further-algebraic-fractions-2758/lessons/solve-algebraic-fraction-equations-c5j6cd/overview) | [Solve algebraic fraction equations involving addition or subtraction |)](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/further-algebraic-fractions-2758/lessons/solve-algebraic-fraction-equations-involving-addition-or-subtraction-6xj32r/overview) |
| Thursday  | [Prove by counter example |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/algebraic-proof-f6a4/lessons/prove-by-counter-example-cdk3cc/overview)  | [Prove an expression will be a multiple of a given number |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/algebraic-proof-f6a4/lessons/prove-an-expression-will-be-a-multiple-of-a-given-number-6tjket/overview)  |
| Friday | [Consecutive number proofs |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/algebraic-proof-f6a4/lessons/consecutive-number-proofs-cnk6ae/overview)  | [Odd and even number proofs |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/algebraic-proof-f6a4/lessons/odd-and-even-number-proofs-c5k34t/overview)  |
| 08/09/25 | Monday  | [Solve linear simultaneous equations where one of the coefficients is equal |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-core-l/units/revise-simultaneous-equations-1dba/lessons/solve-linear-simultaneous-equations-where-one-of-the-coefficients-is-equal-75k64r/overview)  | [Solve linear simultaneous equations where you need to multiply one of the equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-core-l/units/revise-simultaneous-equations-1dba/lessons/solve-linear-simultaneous-equations-where-you-need-to-multiply-one-of-the-equations-6nh64t/overview)  |
| Tuesday  | [Solve linear simultaneous equations where you need to multiply both equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-core-l/units/revise-simultaneous-equations-1dba/lessons/solve-linear-simultaneous-equations-where-you-need-to-multiply-both-equations-c8u62d/overview)  | [Solve linear simultaneous equations where you need to first rearrange |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-core-l/units/revise-simultaneous-equations-1dba/lessons/solve-linear-simultaneous-equations-where-you-need-to-first-rearrange-6gv38c/overview)  |
| Wednesday  | [Checking and securing understanding of interpreting graphs |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/checking-and-securing-understanding-of-interpreting-graphs/overview)  | [Forming simultaneous equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/forming-simultaneous-equations/overview)  |
| Thursday  | [Combining equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/combining-equations/overview)  | [Solving algebraic simultaneous equations by elimination |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-algebraic-simultaneous-equations-by-elimination/overview)  |
| Friday | [Solving more complex simultaneous equations by elimination |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-more-complex-simultaneous-equations-by-elimination/overview)  | [Solving simultaneous linear equations by substitution |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-simultaneous-linear-equations-by-substitution/overview)  |
| 15/09/25 | Monday | [Solving simultaneous linear equations graphically |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-simultaneous-linear-equations-graphically/overview)  | [Solving a quadratic and linear pair of simultaneous equations using elimination |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-a-quadratic-and-linear-pair-of-simultaneous-equations-using-elimination/overview)  |
| Tuesday | [Solving a quadratic and linear pair of simultaneous equations using substitution |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-a-quadratic-and-linear-pair-of-simultaneous-equations-using-substitution/overview)  | [Solving a quadratic and linear pair of simultaneous equations graphically |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-a-quadratic-and-linear-pair-of-simultaneous-equations-graphically/overview)  |
| Wednesday | [Solving simultaneous equations by elimination from a context |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-simultaneous-equations-by-elimination-from-a-context/overview)  | [Solving simultaneous equations via any method |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/solving-simultaneous-equations-via-any-method/overview)  |
| Thursday | [Problem solving with linear and quadratic simultaneous equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/simultaneous-equations-2-variables/lessons/problem-solving-with-linear-and-quadratic-simultaneous-equations/overview)  | [Checking and securing understanding of simplifying |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/algebraic-manipulation/lessons/checking-and-securing-understanding-of-simplifying/overview)  |
| Friday | [Checking and securing understanding of substitution |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/algebraic-manipulation/lessons/checking-and-securing-understanding-of-substitution/overview)  | [Further algebraic terminology |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher/units/algebraic-manipulation/lessons/further-algebraic-terminology/overview)  |
| 22/09/25 | Monday | Trigonometry recall and advanced trigonometry | [Know tangent, sine and cosine |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/know-tangent-sine-and-cosine-6mvk4d/overview)  | [Use tangent to find a length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/use-tangent-to-find-a-length-c5gkge/overview)  |
| Tuesday | [Use sine and cosine to find a length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/use-sine-and-cosine-to-find-a-length-75hk0c/overview)  | [Applying Trigonometry |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/applying-trigonometry-6mup2c/overview)  |
| Wednesday | [Use trigonometry to find the perpendicular height of a triangle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/use-trigonometry-to-find-the-perpendicular-height-of-a-triangle-c4v3ee/overview)  | [Solve basic trigonometry equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/solve-basic-trigonometry-equations-6cup6r/overview)  |
| Thursday | [Use inverse functions to find an angle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/use-inverse-functions-to-find-an-angle-61jp2d/overview)  | [Solve problems mixing angles and sides |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/solve-problems-mixing-angles-and-sides-6djk2e/overview)  |
| Friday | [Know the trigonometry ratios for 0°, 30°,45°,60° and 90° |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/know-the-trigonometry-ratios-for-0-30-45-60-and-90-6nk3ee/overview)  | [Substitute the exact values to find a missing length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/substitute-the-exact-values-to-find-a-missing-length-cgup4d/overview)  |
| 29/09/25 | Monday  | [Use trigonometry to solve bearing problems |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/use-trigonometry-to-solve-bearing-problems-6xgp4c/overview)  | [Know when to use Pythagoras or Trigonometry to solve problems |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/know-when-to-use-pythagoras-or-trigonometry-to-solve-problems-6wt3ac/overview)  |
| Tuesday | [Use the sine rule to find a missing length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-sine-rule-to-find-a-missing-length-cmup4c/overview)  | [Use the sine rule to find a missing angle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-sine-rule-to-find-a-missing-angle-6rvkjd/overview)  |
| Wednesday | [Use the cosine rule to find a missing length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-cosine-rule-to-find-a-missing-length-cmwk6c/overview)  | [Use the cosine rule to find a missing angle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-cosine-rule-to-find-a-missing-angle-6thk8t/overview) |
| Thursday | [Area of a Triangle Using A = ½ absinC |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-2-a197/lessons/area-of-a-triangle-using-a-absinc-68w3gt/overview)  | [Use A = ½ absinC to Find a Missing Length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-2-a197/lessons/use-a-absinc-to-find-a-missing-length-6xk34e/overview)  |
| Friday | [When to Use the Sine or Cosine Rules |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-2-a197/lessons/when-to-use-the-sine-or-cosine-rules-6rvkcc/overview)  | [Sine, Cosine and Area Rules - Mixed Problems |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-2-a197/lessons/sine-cosine-and-area-rules-mixed-problems-60u3ct/overview)  |
| 06/10/25 | Monday | [Trigonometry in 3D shapes |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-3-1dc3/lessons/trigonometry-in-3d-shapes-64vkgc/overview)  | [Solve trig equations involving sin x between 0 and 360 |)](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-3-1dc3/lessons/solve-trig-equations-involving-sin-x-between-0-and-360-ctj3gd/overview) |
| Tuesday | [Solve trig equations involving cos x between 0 and 360 |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-3-1dc3/lessons/solve-trig-equations-involving-cos-x-between-0-and-360-ctgk4r/overview)  | [Area of a Triangle Using A = ½ absinC |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-2-a197/lessons/area-of-a-triangle-using-a-absinc-68w3gt/overview)  |
| Wednesday | [Know tangent, sine and cosine |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/know-tangent-sine-and-cosine-6mvk4d/overview)  | [Use tangent to find a length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/use-tangent-to-find-a-length-c5gkge/overview)  |
| Thursday | [Use sine and cosine to find a length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/use-sine-and-cosine-to-find-a-length-75hk0c/overview)  | [Applying Trigonometry |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-1-0125/lessons/applying-trigonometry-6mup2c/overview)  |
| Friday | [Use trigonometry to find the perpendicular height of a triangle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/use-trigonometry-to-find-the-perpendicular-height-of-a-triangle-c4v3ee/overview)  | [Solve basic trigonometry equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/solve-basic-trigonometry-equations-6cup6r/overview)  |
| 13/10/25 | Monday | [Use inverse functions to find an angle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/use-inverse-functions-to-find-an-angle-61jp2d/overview)  | [Solve problems mixing angles and sides |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-2-5cbb/lessons/solve-problems-mixing-angles-and-sides-6djk2e/overview)  |
| Tuesday | [Know the trigonometry ratios for 0°, 30°,45°,60° and 90° |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/know-the-trigonometry-ratios-for-0-30-45-60-and-90-6nk3ee/overview)  | [Substitute the exact values to find a missing length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/substitute-the-exact-values-to-find-a-missing-length-cgup4d/overview)  |
| Wednesday | [Use trigonometry to solve bearing problems |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/use-trigonometry-to-solve-bearing-problems-6xgp4c/overview)  | [Know when to use Pythagoras or Trigonometry to solve problems |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/trigonometry-3-945e/lessons/know-when-to-use-pythagoras-or-trigonometry-to-solve-problems-6wt3ac/overview)  |
| Thursday | [Use the sine rule to find a missing length |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-sine-rule-to-find-a-missing-length-cmup4c/overview)  | [Use the sine rule to find a missing angle |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-10-higher-l/units/advanced-trigonometry-1-79cc/lessons/use-the-sine-rule-to-find-a-missing-angle-6rvkjd/overview)  |
| Friday |  |  |
| 20/10/25 | Monday | Graphs and solution sets | [Find the gradient of a line |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/find-the-gradient-of-a-line-60wkjd/overview)  | [Find the equation of a straight line using y=mx+c |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/find-the-equation-of-a-straight-line-using-ymxc-60u3gr/overview)  |
| Tuesday | [Find the intercept and gradient from a line given in any form |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/find-the-intercept-and-gradient-from-a-line-given-in-any-form-6mrk8c/overview)  | [Using gradient to solve problems with parallel lines |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/using-gradient-to-solve-problems-with-parallel-lines-cgr36c/overview)  |
| Wednesday | [Plot simple quadratic equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/plot-simple-quadratic-equations-6gr32e/overview)  | [Plot other quadratic equations |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/plot-other-quadratic-equations-65h3ed/overview)  |
| Thursday | [Solving Quadratic Equations Graphically |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/solving-quadratic-equations-graphically-6cr6ad/overview)  | [Identify and interpret roots, intercepts and turning points of quadratic graphs |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/identify-and-interpret-roots-intercepts-and-turning-points-of-quadratic-graphs-c4uk8d/overview)  |
| Friday | [Draw quadratic graphs (a > 1) |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/draw-quadratic-graphs-a-greater-1-cgup2e/overview)  | [Draw quadratic graphs (negative x squared) |](https://www.thenational.academy/pupils/programmes/maths-secondary-year-11-higher-l/units/revise-linear-and-quadratic-graphs-75eb/lessons/draw-quadratic-graphs-negative-x-squared-6hgpcr/overview)  |