Trajectory Education

Headstart 2026

Subject Syllabus & Timeline

VCE Methods 1+2

WEEK 1: THE LANGUAGE OF FUNCTIONS & RELATIONS — 07-12-2025

- Determine if a relation is a function using the vertical line test.
- Specify the rule, domain, and range of a function using correct notation.
- Sketch the graph of an inverse function given the graph of a one-to-one function.

WEEK 2: ALGEBRAIC FOUNDATIONS & QUADRATICS — 14-12-2025

- Expand and factorise quadratic expressions efficiently by hand.
- Use the discriminant to determine if a quadratic equation has zero, one, or two real solutions.
- Convert quadratics into “turning point form” (by completing the square) to aid in graphing.

WEEK 3: CUBIC & QUARTIC POLYNOMIALS — 21-12-2025

- Apply the Factor Theorem to identify linear factors of cubic polynomials.
- Express a cubic polynomial in the form $p(x) = (x-a)q(x) + r$.
- Sketch cubic and quartic graphs by hand, identifying intercepts and the general shape.

WEEK 4: POWER FUNCTIONS & ASYMPTOTES — 28-12-2025

- Sketch graphs of simple power functions and identify their key features (shape, quadrants).
- Identify and label vertical and horizontal asymptotes on graphs.
- Solve simple algebraic equations involving these power functions.

WEEK 5: TRANSFORMATIONS OF THE PLANE — 04-01-2026

- Describe the effect of transformations (dilation, reflection, translation) on a base graph.
- Sketch graphs of functions in the form $y = a(x+b)^n + c$ by transforming the basic graph $y = x^n$.
- Identify the transformations that have occurred given an equation and its parent function.

Headstart classes are **completely free** and a great way to set yourself up for the new school year.

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Questions?

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