**Term 1 Year 11 2025 (Surds, Quadratics Functions, Binomial Expansions, Cubic Functions and Relations, Trigonometric Functions and Probability**

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| **Week** | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 27/1 – 31/1  **1** | **Australia Day Holiday** | **Transition Days** | **UNIT 1 (Surds, Algebra, Functions, Probability) - Topic 1**   * **The real number system and surds**   **Ch1.2**  **Page 8**  **Exercise Q1 to 9, 13, 19.**  ***L1*** |
| 3/2 – 7/2  **2** | **Surds (4 hours)**   * **Simplifying surds**   **Ch1.3**  **Page 14 - 15**  **Exercise Q1 – 6, 9, 11, 13.**  ***L2*** | **Surds**   * **Operations with surds and rationalising the denominator**   **Ch1.4**  **Page 21 – 22**  **Exercise Q1, 3, 6, 8, 10, 13, 16, 19.**  ***L3*** | **Quadratic Functions (7 hours)**   * **Solving quadratic equations with rational roots**   **Ch2.2**  **Page 35-36**  **Exercise Q1, 2, 9.**  ***L4*** |
| 10/2 – 14/2  **3** | **Quadratic Functions**   * **Solving quadratic equations over R**   **Ch2.3**  **Page 42-45**  **Exercise Q2, 11, 15**  ***L5*** | **Quadratic Functions**   * **Graphs of quadratic functions**   **Ch2.4**  **Page 54-57**  **Exercise Q2, 4, 6, 9, 15, 16**  ***L6*** | **Quadratic Functions**   * **The discriminant**   **Ch2.5**  **Page 66-67**  **Exercise Q1, 5, 7, 10.**  (Leave out any requiring polynomial division – only cover 1/x not x/x)  ***L7*** |

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| 17/2 – 21/2  **4** | **Quadratic Functions**   * **Modelling with quadratic functions**   **Ch2.6**  **Page 73- 76**  **Exercise Q1, 2, 9.**  ***L8*** | **Binomial Expansion (3 Hours) – Topic 2**   * **Pascal’s triangle**   **Ch3.2**  **Page 99-100**  **Exercise Q3, 5, 7, 9, 12,**  ***L9*** | **Binomial Expansion**   * **The binomial theorem**   **Ch3.3**  **Page 104-105**  **Exercise Q1, 7, 12.**  ***L10*** |
| 24/2 – 28/2  **5** | **Assignment Lesson FIA1**   * ***Reading the task out*** * ***Begin assessment (Introduction)*** * ***Observations and Assumptions*** * ***Methods Solve***   ***L11*** | **Cubic Functions (9 hours)**   * **Polynomials and cubic functions**   **Ch3.4**  **Page 109-111**  **Exercise Q1, 7, 11.**  ***L12*** | **Cubic Functions**   * **Polynomials and cubic functions**   **Ch3.4**  **Page 109-111**  **Exercise Q14, 15, 17.**  ***L13*** |
| 3/3 – 7/3  **6** | **Assignment Lesson**   * ***Evaluation*** * ***Recommendations*** * ***References L14*** | **Cubic Functions**   * **Graphing cubic functions**   **Ch3.5**  **Page 121-124 Exercise Q2, 4, 6, 9**  ***L15*** | **Cubic Functions**   * **Graphing cubic functions**   **Ch3.5**  **Page 121-124 Exercise Q7, 8, 11**  ***L16*** |
| 10/3 – 14/3  **7** | **Assignment Lesson**  ***L17*** | **Cubic Functions**   * **Modelling cubic functions**   **Ch3.7**  **Page 132-136**  **Exercise Q1, 4, 8.**  ***L18*** | **Cubic Functions**   * **Review**   **Ch3.8**  **Page 137-140**  **Exercise Q1-20**  ***L19*** |

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| 17/3 – 21/3  **8** | **Assessment draft Due FIA1**  ***Submit via TurnItIn***  ***L20*** | **Functions and Relations (5 Hours)**   * **Intro to functions and relations**   **Ch4.2**  **Page 162-165**  **Exercise Q1, 2, 7, 8.**  ***L21*** | **Functions and Relations**   * **Function notation**   **Ch4.3**  **Page 172-175**  **Exercise Q1-5, 10, 13, 17.**  ***L22*** |

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| 24/3 – 28/3  **9** | **Functions and Relations**   * **Piece-wise functions**   **Ch4.4**  **Page 184-188**  **Exercise Q2, 8, 10.**  ***L23*** | **Graphs of Relations (4 hours)**   * **The circle**   **Ch5.2**  **Page 209-211**  **Exercise Q4, 8.**  ***L24*** | **Feedback on the draft**  **FIA1**  ***L25*** |
| 31/3 – 4/4  **10** | **Graphs of Relations**   * **The square root-function**   **Ch5.3**  **Page 216-218**  **Exercise Q2, 5, Q6, 14, 17.**  ***L26*** | **Reciprocal Functions (2 Hours)**  **The reciprocal function**  **Ch5.4**  **Page 226-230**  **Exercise Q1, 2, 5**    ***L27*** | **The reciprocal function**  **Ch5.4**  **Page 226-230**  **Exercise Q6, 9, 13.**  ***L28*** |

**Term 2 Year 11 2025**

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| **Week** | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 22/4 – 25/4  **1** | **Easter Monday** | **. Assessment final Due FIA1**  ***L29*** | **Circular Measure and Radian Measure**  **(2 Hours)**   * **Radian measure**   **Ch6.3**  **Page 259- 261**  **Exercise Q2, 8, 10.**  ***L30*** |
| 28/4 – 2/5  **2** | **Circular Measure and Radian Measure**   * **Unit circle and definitions**   **Ch6.4**  **Page 270-273**  **Exercise Q4, 5, 15.**  ***L31*** | **Introduction to Trigonometric Functions**  **(8 Hours)**   * **Trigonometry review**   **Ch6.2**  **Page 250-252**  **Exercise Q2, 5, 9.**  ***L32*** | **Introduction to Trigonometric Functions**   * **Exact values and symmetry properties**   **Ch6.5**  **Page 282-284**  **Exercise Q7, 9, 16.**  ***L33*** |
| 5/5 – 9/5  **3** | **Labor Day Holiday** | **Introduction to Trigonometric Functions**   * **Graphs of the sine, cosine and tangent functions**   **Ch6.6**  **Page 293-294**  **Exercise Q3, 9, 12.**  ***L34*** | **Introduction to Trigonometric Functions**   * **Solving trigonometry equations**   **Ch6.7**  **Page 304-306**  **Exercise Q4, 8, 10, 15.**  ***L35*** |
| 12/5 – 16/5  **4** | **Introduction to Trigonometric Functions**   * **Transformations of the sine and cosine functions**   **Ch6.8**  **Page 315-321**  **Exercise Q5, 10, 18.**  ***L36*** | **Introduction to Trigonometric Functions**   * **Modelling with trigonometric functions**   **Ch6.9**  **Page 325-330**  **Exercise Q2, 4, 11.**  ***L37*** | **Introduction to Trigonometric Functions**   * **Review**   **Ch6.10**  **Page 331-334**  **Exercise Q1-4, 10, 13, 16(a-d).**  ***L38*** |

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| 19/5 – 23/5  **5** | **Language of Events and Sets (4 Hours)**   * **Ch7.1 Intro to probability** * **Ch7.2 Concepts of probability**   **Ch7.1**  **Ch7.2**  **Page 362-364**  **Exercise Q1, 2, 7, 8, 9, 14.**  ***L39*** | **Language of Events and Sets**   * **Ch7.1 Intro to probability** * **Ch7.2 Concepts of probability**   **Ch7.1**  **Ch7.2**  **Page 362-364**  **Exercise Q1, 2, 7, 8, 9, 14.**  ***L40*** | **Conditional Probability and Independence**  **(7 Hours)**   * **Relative frequency**   **Ch7.3**  **Page 367-368**  **Exercise Q1-3, 7, 10.**  ***L41*** |
| 26/5 – 30/5  **6** | **Exam Revision** | **Exam Revision**  ***L43*** | **Exam Revision**  ***L44*** |
| 2/6 – 6/6  **7** | **Exam Revision**  ***L45*** | **Exam FIA2**  **Topics 1,3,4, 5 *L46*** | **Conditional Probability and Independence**   * **Conditional probability**   **Ch7.4**  **Page 376-379**  **Exercise Q3, 8, 11.**  ***L47*** |
| 9/6 – 13/6  **8** | **Conditional Probability and Independence**   * **Independence**   **Ch7.5**  **Page 383-386**  **Exercise Q1, 3, 7, 14. *L48*** | **Conditional Probability and Independence**   * **Review**   **Ch7.6**  **Page 387-391**  **Exercise Q1-4, 8, 14, 15, 16, 18. *L49*** | **Unit 2 – Topic 1 – Exponential functions**   * **Indices and index laws (4 hours)**   **Ch8.2**  **Page 405-407**  **Exercise Q1, 2, 3, 5, 7, 9, 12, 15.**  ***L50*** |
| 16/6 – 20/6  **9** | **Indices and index laws**   * **Negative and fractional indices**   **Ch8.3**  **Page 413-414**  **Exercise Q4, 6, 8, 11, 12.**  ***L51*** | **Indices and index Laws**   * **Scientific notation**   **Ch8.4**  **Page 418-419**  **Exercise Q1, 7, 9, 11.**  ***L52*** | **Introduction to Exponential Functions (6 hours)**   * **Solving exponential equations**   **Ch9.2**  **Page 430-431**  **Exercise Q1, 5, 7, 8, 12.**  ***L53*** |
| 23/6 – 27/6  **10** | **Introduction to Exponential Functions**   * **Graphs of exponential functions**   **Ch9.3**  **Page 439-440**  **Exercise Q1, 9, 13.**  ***L54*** | **Introduction to Exponential Functions**   * **Modelling with exponential functions**   **Ch9.4**  **Page 443-447**  **Exercise Q1, 14, 16.**  ***L55*** | **Introduction to Exponential Functions**   * **Review**   **Ch9.5**  **Page 448-451**  **Exercise Q1-6, 10, 12, 14, 17.**  ***L56*** |

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 14/7 – 18/7  **1** | **Topic 2 - Logarithms and Logarithmic functions**  **Logarithms and logarithmic laws (5 hours)**   * **Logarithms and logarithmic laws**   **Ch10.2**  **Page 463-466**  **Exercise Q1, 5, 9.**  ***L1*** | **Logarithmic Functions (7 hours)**   * **Indicial equations and logarithms**   **Ch10.3**  **Page 471-472**  **Exercise Q1, 4, 7, 13.**  ***L2*** | **Logarithmic Functions**   * **Graphs and logarithmic functions**   **Ch10.4**  **Page 479-481**  **Exercise Q1, 8, 10. *L3*** |
| 21/7 – 25/7  **2** | **Logarithmic Functions**   * **Modelling with logarithmic functions**   **Ch10.5**  **Page 486-490**  **Exercise Q1, 10, 11, 16.**  ***L4*** | **Topic 3 - Intro to differential calculus**   * **Rates of change and the concept of derivatives (10 Hours)** * **Average rates of change**   **Ch11.2**  **Page 504-508**  **Exercise Q5, 7, 13.**  ***L5*** | **Rates of change and the concept of derivatives**   * **Differentiation from first principles**   **Ch11.3**  **Page 515-517**  **Exercise Q1, 3, 7, 9, 10, 16, 18.**  ***L6*** |
| 28/7 – 1/8  **3** | **Rates of change and the concept of derivatives**   * **Differentiation from first principles**   **Ch11.3**  **Page 515-517**  **Exercise Q1, 3, 7, 9, 10, 16, 18.**  ***L7*** | **Rates of Change and the Concept of Derivatives**   * **Differentiation by rule**   **Ch11.4**  **Page 523-525**  **Exercise Q1, 6, 9, 11, 16, 19.**  ***L8*** | **Rates of Change and the Concept of Derivatives**   * **Interpreting the derivative**   **Ch11.5**  **Page 529-531**  **Exercise Q1, 3, 8, 16, 19.**  ***L9*** |
| 4/8 – 8/8  **4** | **Rates of Change and the Concept of Derivatives**   * **Differentiation of power functions**   **Ch11.6**  **Page 535-538**  **Exercise Q4, 8, 13, 16.**  ***L10*** | **Graphical applications of derivatives (12 hours)**   * **Instantaneous rates of change**   **Ch12.2**  **Page 553-556**  **Exercise Q1, 9, 14, 17, 19.**  ***L11*** | **Graphical applications of derivatives**   * **Tangents and normal of a graph**   **Ch12.3**  **Page 563-566**  **Exercise Q3, 5, 12, 15, 17, 19.**  ***L12*** |
| 11/8 – 15/8  **5** | **A Graphical applications of derivatives**   * **Kinematics**   **Ch12.4**  **Page 572-576**  **Exercise Q1, 4, 6, 9, 11, 15, 17.**  ***L13*** | **Graphical applications of derivatives**   * **Curve sketching**   **Ch12.5**  **Page 588-590**  **Exercise Q2, 3, 4, 5, 8, 10, 13, 15, 18.**  ***L14*** | **Graphical applications of derivatives**   * **Curve sketching**   **Ch12.5**  **Page 588-590**  **Exercise Q2, 3, 4, 5, 8, 10, 13, 15, 18.**  ***L15*** |

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| 18/8 – 22/8  **6** | **Graphical applications of derivatives**   * **Review**   **Ch12.6**  **Page 591- 593**  **Exercise Q1-4, 7, 11, 14, 18.**  ***L16*** | **Topic 5 – Further differentiation (11 hours)**   * **Differentiation rules** * **The chain rule**   **Ch13.2**  **Page 607-610**  **Exercise Q1, 3, 13, 17.**  ***L17*** | **Differentiation rules**   * **The product rule**   **Ch13.3**  **Page 612-614**  **Exercise Q1, 6, 8, 12, 16, 18.**  ***L18*** |
| 25/8 – 29/8  **7** | **Differentiation rules**   * **The quotient rule**   **Ch13.4**  **Page 617-610**  **Exercise Q1, 7, 13, 17.**  ***L19*** | **Differentiation rules**   * **Combinations of the chain rule, product rule and quotient rule**   **Ch13.5**  **Page 621-622**  **Exercise Q1, 5, 7, 11, 15, 18.**  ***L20*** | **.**  **Differentiation rules**   * **Combinations of the chain rule, product rule and quotient rule**   **Ch13.5**  **Page 621-622**  **Exercise Q1, 5, 7, 11, 15, 18.**  ***L21*** |
| 1/9– 5/9  **8** | ***Revision L22*** | ***Revision L23*** | ***Progress Test for Term 3 reporting L24*** |
| 8/9– 12/9  **9** | **Unit 3: Further calculus and introduction to statistics**  **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L25*** | **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L26*** | **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L27*** |
| 15/9 – 19/9  **10** | **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L28*** | **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L29*** | **Topic 1: Differentiation of exponential and logarithmic functions (6 hours)**  ***L30*** |

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 7/10 – 10/10  **1** | **King’s Birthday Holiday** | **Revision *L31*** | **Revision *L32*** |
| 13/10 – 17/10  **2** | **Revision *L33*** | **Revision *L34*** | **Revision *L35*** |
| 20/10 – 24/10  **3** | **Revision**  ***L36*** | **Revision *L37*** | **Revision *L38*** |
| 27/10 – 31/10  **4** | **Revision *L39*** | ***Exam FIA3 L40*** | ***L41*** |
| 3/11 – 7/11  **5** | **Unit 3: Further calculus and introduction to statistics**  **Topic 2: Differentiation of trigonometric functions and differentiation rules (5 hours) *L42*** | **Topic 2: Differentiation of trigonometric functions and differentiation rules (5 hours)*L43*** | Feedback on the Exam ***L44*** |

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| 10/11 – 14/11  **6** | **Topic 2: Differentiation of trigonometric functions and differentiation rules (5 hours)*L45*** | **Topic 2: Differentiation of trigonometric functions and differentiation rules (5 hours)*L46*** | **Topic 2: Differentiation of trigonometric functions and differentiation rules (5 hours)*L47*** |
| 17/11 – 21/11  **7** | ***Problem solving and Revision on Units 1 &2 L40*** | ***Revision on Units 1 &2 Problem solving and L49*** | ***Problem solving and Revision on Units 1 &2 L50*** |
| 24/11 – 28/11  **8** | ***Problem solving and Revision on Units 1 &2***  ***L52*** | ***Problem solving and Revision on Units 1 &2***  ***L53*** | ***Problem solving and Revision on Units 1 &2***  ***L54*** |

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 27/1 – 30/1  **1** |  |  |  |
| 2/2 – 6/2  **2** | ***L1*** | ***L2*** | ***L3*** |
| 9/2 – 13/2  **3** | ***L4*** | ***L5*** | ***L6*** |
| 16/2 – 20/2  **4** | ***L7*** | ***L8*** | ***L9*** |
| 23/2 – 27/2  **5** | ***L10*** | ***L11*** | ***L12*** |
| 2/3 – 6/3  **6** | ***L13*** | ***L14*** | ***L15*** |
| 9/3 – 13/3  **7** | ***L16*** | ***L17*** | ***L18*** |
| 16/3 – 20/3  **8** | ***L19*** | ***L20*** | **Differentiation rules**  ***L21*** |
| 23/1 – 27/1  **9** | **Differentiation rules**  ***L22*** | **Differentiation rules**  ***L23*** | **Differentiation rules**  ***L24*** |
| 30/3 – 2/4  **10** | **The 2nd Derivative and Applications of Differentiation**  ***L25*** | **The 2nd Derivative and Applications of Differentiation**  ***L26*** | **Review Term 1**  ***L27*** |

**Term 2 Year 12 2026**

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 20/4 – 24/4  **1** | **The 2nd Derivative and Applications of Differentiation**  ***L28*** | **The 2nd Derivative and Applications of Differentiation**  ***L29*** | **The 2nd Derivative and Applications of Differentiation**  ***L30*** |
| 27/4 – 1/5  **2** | **The 2nd Derivative and Applications of Differentiation**  ***L31*** | **The 2nd Derivative and Applications of Differentiation**  ***L32*** | **The 2nd Derivative and Applications of Differentiation**  ***L33*** |
| 4/5 – 8/5  **3** | **Labor Day Holiday** | **The 2nd Derivative and Applications of Differentiation**  ***L34*** | **Anti-Differentiation**  ***L35*** |
| 11/5 –15/5  **4** | **Anti-Differentiation**  ***L36*** | **Anti-Differentiation**  ***L37*** | **Anti-Differentiation**  ***L38*** |
| 18/5 – 22/5  **5** | **Anti-Differentiation**  ***L39*** | **Anti-Differentiation**  ***L40*** | **Anti-Differentiation**  ***L41*** |
| 25/5 – 29/5  **6** | **Anti-Differentiation**  ***L42*** | **General Discrete Random Variables**  ***L43*** | **General Discrete Random Variables**  ***L44*** |
| 1/6 – 5/6  **7** | **General Discrete Random Variables**  ***L45*** | **General Discrete Random Variables**  ***L46*** | **Bernoulli Distributions**  ***L47*** |
| 8/6 – 12/6  **8** | **Bernoulli Distributions**  ***L48*** | **Binomial Distributions**  ***L49*** | **Binomial Distributions**  ***L50*** |
| 15/6 – 19/6  **9** | **Binomial Distributions**  ***L51*** | **Binomial Distributions**  ***L52*** |  |
| 22/6 – 26/6  **10** |  |  |  |

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 13/7 – 17/7  **1** | **Unit 4**  **Fundamental Theorem of Calculus and Definite Integrals**  ***L1*** | **Fundamental Theorem of Calculus and Definite Integrals**  ***L2*** | **Fundamental Theorem of Calculus and Definite Integrals**  ***L3*** |
| 20/7 –24/7  **2** | **Applications of Integration**  ***L4*** | **Applications of Integration**  ***L5*** | **Applications of Integration**  ***L6*** |
| 27/7 – 31/7  **3** | **Applications of Integration**  ***L7*** | **Applications of Integration**  ***L8*** | **Applications of Integration**  ***L9*** |
| 3/4 – 7/8  **4** | **Applications of Integration**  ***L10*** | **Cosine and Sine Rules**  ***L11*** | **Cosine and Sine Rules**  ***L12*** |
| 10/8 – 14/8  **5** | **Cosine and Sine Rules**  ***L13*** | **Cosine and Sine Rules**  ***L14*** | **Cosine and Sine Rules**  ***L15*** |
| 17/8 – 21/8  **6** | **Cosine and Sine Rules**  ***L16*** | **Cosine and Sine Rules**  ***L17*** | **Cosine and Sine Rules**  ***L18*** |
| 24/8 – 28/8  **7** | **Cosine and Sine Rules**  ***L19*** | **General Continuous Random Variables**  ***L20*** | **General Continuous Random Variables**  ***L21*** |
| 31/8 – 4/9  **8** | **General Continuous Random Variables**  ***L22*** | **General Continuous Random Variables**  ***L23*** | **General Continuous Random Variables**  ***L24*** |
| 7/9 – 11/9  **9** | **Normal Distributions**  ***L25*** | **Normal Distributions**  ***L26*** | **Normal Distributions**  ***L27*** |
| 14/9 –18/9  **10** | **Normal Distributions**  ***L28*** | **Normal Distributions**  ***L29*** | **Review Term 3**  ***L30*** |

**Term 4 Year 12 2026**

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| Week | **Lesson 1** | **Lesson 2** | **Lesson 3** |
| 5/10 – 9/10  **1** | **King’s Birthday Holiday** | **Random Sampling**  ***L31*** | **Random Sampling**  ***L32*** |
| 12/10 – 16/10  **2** | **Random Sampling**  ***L33*** | **Sample Proportions**  ***L34*** | **Sample Proportions**  ***L35*** |
| 19/2 – 23/10  **3** | **Sample Proportions**  ***L36*** | **Sample Proportions**  ***L37*** | **Sample Proportions**  ***L38*** |
| 26/10 – 30/10  **4** | **Sample Proportions**  ***L39*** | **Sample Proportions**  ***L40*** | **Confidence Intervals for Proportions**  ***L41*** |
|  | **Confidence Intervals for Proportions**  ***L42*** | **Confidence Intervals for Proportions**  ***L43*** | **Confidence Intervals for Proportions**  ***L44*** |
|  | **Confidence Intervals for Proportions**  ***L45*** | **Confidence Intervals for Proportions**  ***L46*** | **Confidence Intervals for Proportions**  ***L47*** |
|  | **Confidence Intervals for Proportions**  ***L48*** | **Confidence Intervals for Proportions**  ***L49*** |  |