| Time Allocation | Topic/s | Key Teaching Points | Nelson Reference | Assessment |
|---|---|---|---|---|
| Weeks 1–5 (20 hours) | Topic 1.1 Consumer arithmetic | **Applications of rates and percentages and use of spread sheets** (1.1.1 – 1.1.8)<br>· Salary, wages (including piecework/overtime) allowances and commissions<br>· Government allowances and pensions<br>· Prepare personal budgets<br>· Unit cost method for price comparison<br>· Percentage increase and decrease, simple and compound interest<br>· Currency exchange rates<br>· Share dividends and price earnings ratio<br>· Use a spreadsheet for above computations as appropriate | Please refer to www.nelsonnet.com.au as there are many teaching resources including worksheets & investigations that support this textbook.<br><br> Chapter 1<br>Chapter 4<br>Chapter 6 | **Week 2**<br>Investigation<br>Finance Applications (6%)<br><br>**Week 5**<br>Topic Test 1 (7%) |
| Weeks 6–7 (5 hours) | Topic 1.2 Algebra and Matrices | **Linear and non-linear expressions** (1.2.1 – 1.2.3)<br>· Numerical substitution into expressions<br>· Formulae evaluation<br>· Spread sheets, tables and formulas | Chapter 2 | |
| Weeks 7–9 (10 hours) | Topic 1.2 Algebra and Matrices | **Matrices and matrix arithmetic** (1.2.4 – 1.2.7)<br>· Matrices and storage/displaying of information<br>· Size and type of matrices<br>· Matrix arithmetic<br>· Solve problems using matrices | Chapter 3 | **Week 9**<br>Topic Test 2 (7%)<br><br>**End of T1** |

| Week 10-12 (12 hours) | Topic 1.3 Shape and measurement | **Pythagoras' Theorem** (1.3.1)<br>Solve problems in 2 and 3 dimensions using Pythagoras' theorem<br>**Mensuration** (1.3.2 – 1.3.4)<br>· Perimeter and area of 2-D shapes, including sectors and other composite shapes<br>· Volume of standard objects such as prisms, pyramids, cones, spheres, practical applications<br>· Surface area, standard and composite shapes, practical applications | Chapter 5 | |
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| Weeks 13–14 (8 hours) | Topic 1.3 Shape and measurement | **Similar figures and scale factors** (1.3.5 – 1.3.8)<br>· Conditions of similarity, similar triangles<br>· Scale factors and linear scaling problems<br>· Scale drawings (maps and building plans),problem solving<br>· Scale factors and areas of similar figures<br>Scale factors and surface area/volume of similar solids | Chapter 7 | **Week 14**<br>Topic Test 3 (7%) |
| Week 15 | | Revision / end of Unit 1 | | **Unit 1 Exam (15%)** |

| Weeks 16–20 (18 hours) | Topic 2.1 Univariate data analysis and the statistical investigation process | **The statistical investigation process** (2.1.1)<br>· Identifying a problem and posing a statistical question<br>· Collecting or obtaining data<br>· Analysing the data<br>· Interpreting and communicating the results<br>**Making sense of data relating to a single statistical variable** (2.1.2 – 2.1.9)<br>· Classifying categorical variables – organising the data<br>· Classifying numerical variables (discrete/continuous) – describe the distribution, modality, shape, location and spread – interpret in context<br>· Mean and standard deviation (using technology)<br>· Deviations from the mean in normally distributed data<br>· Quantiles in normally distributed data, the 65%, 95% and 99.7% rule, calculating probabilities for normal distributions | Chapter 8 | **Week 20**<br>Topic Test 4 (7%) |
| --- | --- | --- | --- | --- |
| Week 20–22 (7 hours) | Topic 2.1 Univariate data analysis and the statistical investigation process | **Comparing data for a numerical variable across two or more groups** (2.1.10 – 2.1.12)<br>· Box plots, outliers<br>· Compare groups, interpret and report findings<br>· The statistical process for comparing groups | Chapter 11 | **Week 21**<br>Investigation Statistical Applications (6%) |
| Week 22–24 (10 hours) | Topic 2.2 Applications of trigonometry | **Applications of trigonometry** (2.2.1 – 2.2.3)<br>· Trigonometry of the right triangle<br>· Area of triangles, Heron's rule and solution of practical problems<br>Sine and cosine rule and application to problems (excluding ambiguous case) | Chapter 10 | **Week 24**<br>Topic Test 5 (7%) |
| Week 24–27 (10 hours) | Topic 2.3 Linear equations and their graphs | **Linear equations** (2.3.1 – 2.3.2)<br>· Identify and solve linear equations<br>· Word problems<br>**Straight-line graphs and their applications** (2.3.3 – 2.3.6)<br>· Construction of graphs<br>· Gradient and intercepts, model linear relationships<br>· Interpret graphs and analyse practical situations | Chapter 9 | **Week 27**<br>Topic Test 6 (7%) |

| Week 27–29<br>(10 hours) | | **Simultaneous linear equations and their applications** (2.3.7 – 2.3.8) | Chapter 12 | **Week 28**<br>Investigation<br>Linear graph<br>Applications (6%) |
|---|---|---|---|---|
| | | · Solving simultaneous equations – graphically, algebraically and using technology appropriately<br>· Solve practical problems<br>**Piece-wise linear graphs and step graphs** (2.3.9 – 2.3.10)<br>· Sketch piece-wise linear graphs, step graphs<br>· Interpret and use to model practical situations | | |
| Week 29–30 | | **Revision/end of course assessment** | | **Exam (25%)** |

ASSESSMENT SCHEDULE

| WHEN | WHAT | TITLE | WEIGHTING |
|---|---|---|---|
| Week 2 | Investigation | Finance Application | 6% |
| Week 5 | Response | Topic Test 1 | 7% |
| Week 9 | Response | Topic Test 2 | 7% |
| Week 14 | Response | Topic test 3 | 7% |
| Week 15 | Exam | End of Unit 1 | 15% |
| Week 20 | Response | Topic test 4 | 7% |
| Week 21 | Investigation | Statistical Applications | 6% |
| Week 24 | Response | Topic Test 5 | 7% |
| Week 27 | Response | Topic Test 6 | 7% |
| Week 28 | Investigation | Linear Graph Applications | 6% |
| Week 30 | Exam | End of Y11 Course | 25% |