| **Dimensions of consumer and financial literacy** | **Thread** | **Year 7** | **Year 8** | **Year 9** | **Year 10** | **Year 10A** |
| --- | --- | --- | --- | --- | --- | --- |
| **Competencies and skills** | **Number and place value** | Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151) | Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183) |  |  |  |
| Compare, order, add and subtract integers (ACMNA280) |  |  |  |  |
| **Real numbers** | Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154) | Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187) |  |  |  |
|  | Round decimals to a specified number of decimal places (ACMNA156) | Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188) | Solve problems involving direct proportion. Explore the relationship between graphs and equations corresponding to simple rate problems (ACMNA208) |  |  |
|  | Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157) |  |  |  |  |
| **Competencies and skills** | **Real numbers** | Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158) |  |  |  |  |
| Recognise and solve problems involving simple ratios (ACMNA173) |  |  |  |  |
| **Money and financial mathematics** | Investigate and calculate ‘best buys’, with and without digital technologies (ACMNA174) | Solve problems involving profit and loss, with and without digital technologies (ACMNA189) | Solve problems involving simple interest (ACMNA211) | Connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies (ACMNA229) |  |
| **Patterns and algebra** | Introduce the concept of variables as a way of representing numbers using letters (ACMNA175) |  |  | Substitute values into formulas to determine an unknown (ACMNA234) |  |
| Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176) |  |  |  |  |
| Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177) |  |  |  |  |
| **Competencies and skills** | **Linear and non-linear relationships**  | Solve simple linear equations (ACMNA179) | Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194) |   | Solve problems involving linear equations, including those derived from formulas (ACMNA235) |  |
|  | Investigate, interpret and analyse graphs from authentic data (ACMNA180) |  | Graph simple non-linear relations with and without the use of digital technologies and solve simple related equations (ACMNA296) | Solve linear simultaneous equations, using algebraic and graphical techniques, including using digital technology (ACMNA237) |  |
| **Data representation and interpretation** | Construct and compare a range of data displays including stem- and-leaf plots and dot plots (ACMSP170) | Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293) | Construct back-to-back stem- and-leaf plots and histograms and describe data, using terms including ‘skewed’, ‘symmetric’ and ‘bi modal’ (ACMSP282) | Construct and interpret box plots and use them to compare data sets (ACMSP249) |  |
| Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171) | Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207) | Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread (ACMSP283) | Compare shapes of box plots to corresponding histograms and dot plots (ACMSP250) | Calculate and interpret the mean and standard deviation of data and use these to compare data sets (ACMSP278) |
| Describe and interpret data displays using median, mean and range (ACMSP172) |  |  | Use scatter plots to investigate and comment on relationships between two numerical variables (ACMSP251) |  |
|  |  |  | Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data (ACMSP253) |  |
| **Responsibility and enterprise** | **Chance** |  | Investigate techniques for collecting data, including census, sampling and observation (ACMSP284) | Investigate reports of surveys in digital media and elsewhere for information on how data were obtained to estimate population means and medians (ACMSP227) |  | Investigate reports of studies in digital media and elsewhere for information on their planning and implementation (ACMSP277) |
| **Data representation and interpretation** | Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169) | Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206) | Identify everyday questions and issues involving at least one numerical and at least one categorical variable, and collect data directly and from secondary sources (ACMSP228) |  |  |