# Mathematics Essential – General Year 11

## Unit 1 and Unit 2

#### Semester 1

| **Week** | **Key teaching points** |
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| 1–2  (6 hours) | Skills review—Calculations with whole numbers, order of operations, rounding to suit the context, converting metric units, decimal, fraction and percentage amounts of quantities, amount expressed as a percentage of another, percentage increases and decreases.  1.1–1.15  MAWA Book: Topic 1 - 3 |
| 2–4  (10 hours) | Nutrition and health  Practical applications involving linear measurement, mass, capacity, rates, practical formulas and interpreting information presented in tables and graphs. Using the mathematical thinking process to solve problems.  1.1.1–1.1.18, 1.2.1–1.2.2, 1.3.1–1.3.3, 1.3.9–1.3.18, 1.4.1–1.4.3  MAWA Book: Topic 4 - 10 |
| 5–7  (12 hours) | Practical applications of area and volume/capacity  Area, volume and capacity, units of measurement  1.1.16–1.1.17, 1.3.5–1.3.8  MAWA Book: Topic 11 – 13 |
| 8–10  (12 hours) | Earning money 1  Rates of pay—weekly/fortnightly, annual income, quotes, career research/incomes  1.1.1–1.1.18, 1.3.1–1.3.8, 1.3.11, 1.3.14, 1.2.1–1.2.2, 1.4.1–1.4.3  MAWA Book: Topic 14 – 15 |
| 11–12  (6 hours) | Earning money 2  Commission, superannuation, income tax  1.1.1–1.1.15, 1.4.1–1.4.6  MAWA Book: Topic 16 – 19 |
| 12  (2 hours) | Managing money  Bank accounts, percentages, using formulas  1.1.1–1.1.15, 1.2.1–1.2.2  MAWA Book: Topic 20 - 21 |
| 13–14  (8 hours) | Spending money  Discounts, best buys, budgets, using data to make decisions  1.1.1–1.1.18, 1.2.1–1.2.2, 1.3.9–1.3.14, 1.4.1–1.4.6  Project  MAWA Book: Topic 22 - 250 |
| 15–16  (8 hours) | Revision and assessment |

**Baldivis Secondary College**

**Assessment Outline Report: 2016**

**Assessment Outline: G1MAE Semester One**

**Course: Mathematics Essentials**

**Unit: G1MAE**

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| **Assessment Type** | **Weightings**  **(syllabus)** | **% Weight**  **Year** | **When** | **Task Description and Content** | **Max Score** |
| Response | 50.0%  (50%) | 1 | ~ Fortnightly | **1**  1.1 Skills Test z  10 - 15 min | 14.0 |
|  |  | 1 | ~ Fortnightly | **2**  1.2 Skills Test z  10 - 15 min | 16.0 |
|  |  | 1 | ~ Fortnightly | **3**  1.3 Skills Test z  10 - 15 min | 22.0 |
|  |  | 1 | ~ Fortnightly | **4**  1.4 Skills Test z  10 - 15 min | 16.0 |
|  |  | 1 | ~ Fortnightly | **5**  1.5 Skills Test z  10 - 15 min | 18.0 |
|  |  | 1 | ~ Fortnightly | **6**  1.6 Skills Test z  10 - 15 min | 16.0 |
|  |  | 1 | ~ Fortnightly | **7**  1.7 Skills Test z  10 - 15 min | 16.0 |
|  |  | 5 | ~ Week 6 | **8**  Test 1  meas, %, rates - MAWA test 1 | 40.0 |
|  |  | 6 | ~ Week 10 | **9**  Test 2  Meas, rates, dec | 32.0 |
|  |  | 7 | ~ Week 15 | **10**  Test 3  finance, fractions | 25.0 |
| Practical applications | 50.0%  (50%) | 6 | ~ Week 4 | **11**  Prac App 1  Measure, estimation - How Big MAWA- MTP | 50.0 |
|  |  | 7 | ~ Week 7 | **12**  Prac App 2  Rates, Calc, use Formula – Basal Met Rate - MTP | 25.0 |
|  |  | 12 | ~ Week 14 | **13**  Prac App 3  meas, budget - Home Decorating - MTP | 100.0 |
| **Total** |  | **50** |  |  |  |

#### Semester 2

| **Week** | **Key teaching points** |
| --- | --- |
| 1–2  (5 hours) | Statistical Investigation Process Part 1: Questions that can be answered with secondary data; selecting and applying appropriate graphical techniques to analyse the data, interpret the results of this analysis and relate the interpretation to the original question.  Types of data, frequency distributions which represent data—column/bar graphs, dot plots, stem and leaf plots, histograms, suitability of data presentation in real world contexts  2.1.1–2.1.6, 2.2.1–2.2.2  MAWA Book: Topic 26 – 27 |
| 2  (3 hours) | Statistical Investigation Process Part 2: Selecting and applying appropriate numerical techniques to analyse the data; interpret the results of this analysis and relate the interpretation to the original question.  Summarising and interpreting data using mean, mode and median as measures of central tendency, range, interquartile range, standard deviation as measures of spread.  2.1.7–2.1.13  MAWA Book: Topic 29 – 31 |
| 3  (3 hours) | Comparing data sets  Using back to back stem plots, box and whisker plots, and histograms to compare data distributions. Interpreting symmetry, skewness and bimodality of data sets.  Constructing box and whisker plots from a five number summary.  2.1.14–2.1.17  MAWA Book: Topic 32 – 35 |
| 3–4  (5 hours) | Modelling the Statistical investigation process to real world situations which involve secondary data.  Communicate findings in a systematic and concise manner.  Statistical investigation assessment: Are male better drivers?  MAWA Book: Topic 36 – 37 |
| 5–7  (10 hours) | Ratio and rates  Using ratios to compare quantities of the same kind in practical situations, relationship between fractions, percentages and ratio. Using rates to compare quantities of a different kind in practical situations; pay rates, costs per day, birth rates, interest rates and simple interest, exchange rates.  2.2.1–2.2.4, 2.3.1–2.3.6, 2.3.8–2.3.12  MAWA Book: Topic 38 – 41 |
| 7–9  (8 hours) | Time  Units of time, conversions between units, fractional, digital and decimal representations of time, timetables  2.4.1–2.4.6  MAWA Book: Topic 42 – 43 |
| 9–11  (8 hours) | Speed and distance  Speed expressed as a rate, average speed, fuel consumption, reaction times, stopping time and braking distance, interpreting distance versus time graphs, calculating speed, distance and time from a distance vs time graph.  2.1.7–2.1.8, 2.3.8–2.3.11, 2.4.10–2.4.11, 2.4.13–2.4.14  MAWA Book: Topic 44 – 47 |
| 11–13  (10 hours) | Maps and travel  Using ratio to interpret and use scales on maps, planning journeys, Skills Testest path on routes, average speed.  2.4.4–2.4.5 2.4.7–2.4.9, 2.4.12  Travel project using the mathematical thinking process  MAWA Book: Topic 48 - 50 |
| 14–15  (8 hours) | Revision and assessment |

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**Assessment Outline Report: 2016**

**Assessment Outline: G2MAE Semester Two**

**Course: Mathematics Essentials**

**Unit: G2MAE**

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| **Assessment Type** | **Weightings**  **(syllabus)** | **% Weight**  **Year** | **When** | **Task Description and Content** | **Max Score** |
| Response | 50.0%  (50%) | 1 | ~ Fortnightly  ~Week 2 | **2.1**  1.1 Skills Test | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 4 | **2.2**  1.2 Skills Test | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 6 | **2.3**  1.3 Skills Test | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 8 | **2.4**  1.4 Skills Test (inc Ratio, Rates) | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 10 | **2.5**  1.5 Skills Test | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 2 (T4) | **2.6**  1.6 Skills Test | 10.0 |
|  |  | 1 | ~ Fortnightly  ~Week 4 (T4) | **2.7**  1.7 Skills Test | 10.0 |
|  |  | 8 | ~ Week 7 | **2.8**  Major Test 1  Stats | 100.0 |
|  |  | 10 | ~ Week 5 (T4) | **2.9**  Major Test 2  Maps, Time tab, speed, Dist | 100.0 |
| Practical applications | 24.0%  (0%-50%) | 12 | ~ Week 3 (T4) | **2.11**  Prac Inv 2  Project Travel itinery - MTP | 100.0 |
| Statistical investigation process | 26.0%  (0%-50%) | 13 | ~ Week 4 | **2.10**  Prac Inv 1  Are Males Better Drivers - SIP | 100.0 |
| **Total** |  | **50** |  |  |  |