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|  | **Western Mathematics**  **2016 Year 10**  **Half Yearly Examination**  **Mathematics Courses**  **Mapping Grids** |
|  | The Half Yearly Exams are denoted as being for the Mathematics and Advanced Mathematics courses. These correspond to the Core Year 9 – 10 course for the Australian Curriculum and the 10A Course which has additional topics. This corresponds basically to the 5.2 and 5.3 courses in NSW.  The Mathematics and Advanced Mathematics exams are both 2 hour exams of 80 marks and have 50% of their content in common, which allows for comparision between students of a similar ability in the different courses, for allocation of grades etc. The common sections are highlighted in yellow. All of the short answer, non calculator section is common, and the last 20 Multiple Choice questions in the Mathematics paper are common with the first 20 Multiple Choice questions in the Advanced Maths Paper.  Some schools do not persist with non-calculator sections after the NAPLAN stages, but we feel it is still worthwhile. If you don’t want a non-calculator section, just change the name of the first section to Short Answer Section.  We anticipate that many schools will not be running full 2 hour exams, but due to the different content covered at the time of the half yearlys, you should be able to take out the topics you don’t want to include and still have substantial exams. If you want to add content, it can be taken from the Assessment Bank topic tests.  Any feedback would be appreciated, as it will help with future papers, in particular for the Year 10 Yearly exam, which will be of a similar format.  All the best  Garry Thorn  WME |

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|  | **Year 10 Maths Course** | **Year 10 Advanced Course** |
|  | **Short Answer (Common)** | **Short Answer (Common)** |
|  | Order of Operations | Order of Operations |
|  | Rational numbers - Fractions | Rational numbers - Fractions |
|  | Rational numbers - Decimals | Rational numbers - Decimals |
|  | Integers | Integers |
|  | Financial Maths - Discount | Financial Maths - Discount |
|  | Ratio and Rates - Interpret | Ratio and Rates - Interpret |
|  | Basic Geometry Angles | Basic Geometry Angles |
|  | Basic Geometry Triangles | Basic Geometry Triangles |
|  | Perimeter | Perimeter |
|  | Area Triangle | Area Triangle |
|  | Volume of Prisms | Volume of Prisms |
|  | Basic Algebra Collecting like terms | Basic Algebra Collecting like terms |
|  | Basic Algebra Division | Basic Algebra Division |
|  | Basic Algebra Expand Brackets | Basic Algebra Expand Brackets |
|  | Coordinate Geometry – midpoint | Coordinate Geometry – midpoint |
|  | Standard Notation | Standard Notation |
|  | Solve an Equation | Solve an Equation |
|  | Basic Probability | Basic Probability |
|  | Representing Data – Stem and Leaf Plot | Representing Data – Stem and Leaf Plot |
|  | Measures of Central Tendency - Mean | Measures of Central Tendency - Mean |

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|  | **Multiple Choice** | **Multiple Choice** |
|  | Rational numbers – Conversions | Earning money – Overtime |
|  | Rational numbers – Percentages | Financial Maths – Time payment |
|  | Ratio and rates – simplify | Ratio and Rates – Rates |
|  | Financial Maths – Simple interest | Basic Geometry Congruence |
|  | Basic Geometry - Parallel Lines | Basic Geometry – Reasoning |
|  | Basic Geometry - Quadrilateral | Basic Geometry – Polygons |
|  | Basic Geometry – Transformations | Volume of Cylinder |
|  | Compound Area | Surface Area of Triangular Prism |
|  | Surface Area Prism | Right Triangle Trigonometry |
|  | Volume of Prism | Right Triangle Trigonometry |
|  | Pythagoras’ Theorem | Basic Probability – Relative Frequency |
|  | Right Triangle Trigonometry | Factors |
|  | Basic Algebra Substitution | Linear Function |
|  | Basic Algebraic Factors | Linear Function |
|  | Coordinate Geometry – Gradient | Indices |
|  | Equations and Inequalities | Inequalities |
|  | Stem and Leaf – Shape of Distribution | Shape of Distribution - Dot Plot |
|  | Stem and Leaf - comparing medians | Accuracy of Statistical Measures - Dot Plot |
|  | Measures of Central Tendency- mean | Sector Graph |
|  | Representing data - Line graph | Measures of distribution –- Frequencies |
|  | Earning money – Overtime | Compound Interest |
|  | Financial Maths – Time payment | Depreciation |
|  | Ratio and Rates – Rates | Surds and indices |
|  | Basic Geometry Congruence | Surds |
|  | Basic Geometry – Reasoning | Surds |
|  | Basic Geometry – Polygons | Basic Geometry Circle |
|  | Volume of Cylinder | Right Triangle Trigonometry |
|  | Surface Area of Triangular Prism | Volume of a Sphere. |
|  | Right Triangle Trigonometry | SA of a Pyramid |
|  | Right Triangle Trigonometry | Binomial Products |
|  | Basic Probability – Relative Frequency | Algebraic Fractions |
|  | Factors | Simultaneous Equations |
|  | Linear Function | Quadratic Equations |
|  | Linear Function | Graphs of Physical Phenomena |
|  | Indices | Non Linear Graphs |
|  | Inequalities | Basic Probability Multi Step events |
|  | Shape of Distribution - Dot Plot | Basic Probability– Venn diagram |
|  | Accuracy of Statistical Measures - Dot Plot | Box Plots |
|  | Sector Graph | Measures of Spread – Standard Deviation |
|  | Measures of distribution –- Frequencies | Analysis of Mean and Standard Deviation |

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|  | **Longer Answer Questions** | | **Longer Answer Questions** | |
|  | Geometry (G) | 2 | Surface Area and Volume of Cone.(M) | 2 |
|  | Surface Area and Volume of Prisms and Cylinder (M) | 2 | Right Triangle Trigonometry (M) | 2 |
|  | Right Trigonometry (M) | 3 | Binomial Products and Factors including algebraic fractions (A) | 3 |
|  | Basic Probability (P) | 3 | Coordinate Geometry (A) | 2 |
|  | Data: Measures of Central Tendency and Spread. (D) | 3 | Non Linear Equations (A) | 3 |
|  | Algebraic Fractions (A) | 2 | Non Linear Graphs (A) | 3 |
|  | Algebra – Equations (A) | 2 | Surds | 3 |
|  | Coordinate Geometry (A) | 3 | Data: Measures of Central Tendency and Spread. (D) | 2 |
|  | **Total Longer Answer Questions** | 20 | **Total Longer Answer Questions** | 20 |