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|  | Western Mathematics  2016 Year 10  Yearly Examination  Mathematics Courses  Mapping Grids |
|  | We produce yearly exams at two levels, and they are called the exams for the Mathematics Course 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 fields with the course names are editable on the exam and can be changed to suit the name for the respective course you are assessing. If you change any of the fields on the front page of the exam, such as the course name and school name, this should change the name wherever that field occurs through the exam. Make sure you click on the name and type your changes inside the box that appears around the field.  The Mathematics and Advanced Mathematics exams are both 2 hour exams of 100 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 questions are highlighted on the mapping grid. All of the short answer, non calculator section is common, and the last 25 MC questions in the Mathematics paper are common with the first 25 MC 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 non-calculator, 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, 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 next years papers, which we anticipate will be of a similar format, subject to the results of your feedback.  All the best  Garry Thorn  WME |

Section 1

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| --- | --- | --- |
|  | Year 10 Mathematics  Course | Year 10 Advanced Maths Course |
|  | **Short Answer (Common)** | **Short Answer (Common)** |
|  | Rational numbers  Interpret Percentage | Rational numbers  Interpret Percentage |
|  | Rational numbers  Fraction of a quantity | Rational numbers  Fraction of a quantity |
|  | Integers | Integers |
|  | Basic Geometry – Angles on || lines | Basic Geometry – Angles on || lines |
|  | Basic Geometry – Angle sum quadrilateral | Basic Geometry – Angle sum quadrilateral |
|  | Basic Measurement – Time | Basic Measurement – Time |
|  | Area of trapezium | Area of trapezium |
|  | Volume of Prism | Volume of Prism |
|  | Basic Algebraic Techniques | Basic Algebraic Techniques |
|  | Basic Algebraic Techniques | Basic Algebraic Techniques |
|  | Coordinate Geometry – Gradient | Coordinate Geometry – Gradient |
|  | Indices | Indices |
|  | Equations and Inequalities | Equations and Inequalities |
|  | Representing Data – Column Graph | Representing Data – Column Graph |
|  | Measures of Central Tendency – Mean | Measures of Central Tendency – Mean |
|  | Ratio – Simplify | Ratio – Simplify |
|  | Coordinate Geometry – Midpoint | Coordinate Geometry – Midpoint |
|  | Right Triangle Trigonometry | Right Triangle Trigonometry |
|  | Surface Area of Prisms | Surface Area of Prisms |
|  | Volume of Pyramids | Volume of Pyramids |
|  | Transformation – Rotation | Transformation – Rotation |
|  | Basic Probability | Basic Probability |
|  | Linear Graphs | Linear Graphs |
|  | Non- Linear Graphs | Non- Linear Graphs |
|  | Similarity | Similarity |

Section 2 - Part A

|  |  |  |
| --- | --- | --- |
|  | Year 10 Mathematics  Course | Year 10 Advanced Maths Course |
|  | **Multiple Choice** | **Multiple Choice** |
|  | Rational numbers  Equivalent fractions | Rational numbers – Number Line |
|  | Rational numbers  Decimals | Simple interest – finding the time |
|  | Earning & Spending – Salary | Basic Geometry – Angles at a Point |
|  | Financial Maths - Profit | Basic Geometry – Isosceles triangles |
|  | Basic Geometry - Quadrilateral | Depreciation |
|  | Units of Volume and Capacity | Basic Algebra – Expansions |
|  | Area of Triangle | Basic Algebra – Factors |
|  | Basic Algebra – Like terms | Basic Algebra – Algebraic fractions |
|  | Congruence | Coordinate Geometry -Linear Graphs |
|  | Basic Algebra - Expand brackets | Scientific Notation |
|  | Collecting and Representing Data | Inequalities |
|  | Coordinate Geometry – Distance | Collecting and Representing Data |
|  | Indices | Measures Central Tendency |
|  | Equations | Basic Probability |
|  | Ratios – Equivalent ratios | Right Triangle Trigonometry – Bearings |
|  | Collecting and Representing Data | Right Triangle Trigonometry – Finding Hypotenuse |
|  | Measures of spread -Quartiles | Similarity |
|  | Right Triangle Trigonometry - Angle | Rates - Speed |
|  | Right Triangle Trigonometry – Side | Compound Interest |
|  | Compound Interest | Bivariate data Scatter plot |
|  | Surface Area of Cylinder | Bivariate data Scatter plot |
|  | Volume Irregular Prism | Coordinate Geometry – Parallel lines |
|  | Basic Probability | Indices |
|  | Similarity | Non Linear graphs |
|  | Distance Time Graphs | Non Linear graphs |
|  | Rational numbers – Number Line | Coordinate Geometry – Parallel lines |
|  | Simple interest – finding the time | Volume of Cone. |
|  | Basic Geometry – Angles at a Point | Equations |
|  | Basic Geometry – Isosceles triangles | Measures of Spread – Standard Deviation |
|  | Depreciation | Algebraic Fractions |
|  | Basic Algebra – Expansions | Non Linear Graphs |
|  | Basic Algebra – Factors | Quadratic Equations |
|  | Basic Algebra – Algebraic fractions | Simultaneous Equations |
|  | Coordinate Geometry -Linear Graphs | Graphs of Physical Phenomena |
|  | Scientific Notation | Surds |
|  | Inequalities | Surface Area Sphere |
|  | Collecting and Representing Data | Literal Equations |
|  | Measures Central Tendency | Binomial Products |
|  | Basic Probability | Surface Area – Pyramid |
|  | Right Triangle Trigonometry – Bearings | Comparing distributions – Mean and Standard Deviation |
|  | Right Triangle Trigonometry – Finding Hypotenuse | Non Right Angled Triangle Trigonometry  Cos rule finding a side |
|  | Similarity | Similarity - Deductive Geometry |
|  | Rates - Speed | Further Probability – Counting Techniques |
|  | Compound Interest | Coordinate Geometry – Equation of Line |
|  | Bivariate data Scatter plot | Circle Geometry |
|  | Bivariate data Scatter plot | Non Right Angled Triangle Trigonometry  Sin rule finding an angle |
|  | Coordinate Geometry – Parallel lines | Coordinate Geometry – Perpendiculars |
|  | Indices | Further Probability – Counting Techniques |
|  | Non Linear graphs | Quadratic Equations |
|  | Non Linear graphs | Non Linear Graphs |

Section 2 - Part B

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|  | Year 10 Mathematics  Course | | Year 10 Advanced Maths Course | |
|  | **Longer Answer Questions** | | **Longer Answer Questions** | |
|  | Topics | Marks | Topics | Marks |
|  | Data: Measures of Central Tendency and Spread. | 4 | Data: Measures of Central Tendency and Spread | 3 |
|  | Basic Measurement  Area Surface Area and Volume of Triangular Prism | 3 | Algebra and Linear Equations | 3 |
|  | Equations | 4 | Further Algebra – Algebraic fractions and literal equations | 3 |
|  | Compound Interest | 2 | Circle Geometry | 3 |
|  | Geometry | 2 | Non Right Angled Triangle Trigonometry  Bearings - sin rule finding a side  Finding an area | 3 |
|  | Right Triangle Trigonometry | 4 | Linear Equations | 4 |
|  | Coordinate Geometry | 4 | Quadratic Equations | 3 |
|  | Probability | 2 | Non Linear Graphs | 3 |