

YEAR 9 MATHEMATICS

TERM 3

- Unit Outline -



Course Description:

This unit incorporates the Western Australian Curriculum Mathematic content strands of *Number and Algebra*, *Measurement* and *Statistics and Probability*. The main focus of this unit is applying the distributive law to the expansion of algebraic expressions, data representation and interpretation and finding the volume of cylinders and right prisms

Course Outcomes:

By the end of this unit you should be able to:

- Construct back-to-back Stem-and-leaf plots and histograms
- Describe data using terms such as 'skewed' and 'bi-modal'
- Expand algebraic expressions
- Collect like terms and simplify an algebraic expression
- Find the volume of a cylinder and right prism
- Construct tree diagrams
- Assign probabilities

Course Organisation:

Student's activities will include:

- Student based investigations to discover rules, laws and concepts
- Hands-on/real life activities wherever possible
- Teacher directed instruction and explanation combined with student practise of a new skill
- Group and partner work to consolidate learning
- Using technologies to investigate, solve and present problems and skills

Course Timeline:

Wk	Activity	Assessment
1-2	Number and Algebra- Money and Financial Mathematics <ul style="list-style-type: none">• Solve problems involving salary and wages• Solve problems, including with technology. Involving simple interest	In class work In class assignment (which may need to be finished at home)
3-6	Number and Algebra- Linear and non-linear relationships <ul style="list-style-type: none">• Sketch linear graphs using co-ordinates of two points• Solve linear equations• Find the mid-point and gradient of a line segment• Find the distance between two points located on the Cartesian plane	Class assigned work Mid Semester Test wk 6
7-9	Measurement and Geometry- Trigonometry <ul style="list-style-type: none">• Investigate sine, cosine and tangent ratios for a given angle in a right-angled triangle• Apply trigonometry to solve right-angled triangle problems	Open book Test end of week 9 Class investigation Class assigned work
10	Country Week	

Course Vocabulary:

- Simple interest
- Principal
- Term
- Annum
- Per annum
- Rate
- Cartesian plane
- Linear
- Non- linear
- Mid-point
- Gradient
- Y- intercept
- Plot
- Graph
- Segment
- Sine
- Cosine
- Tangent
- Right angled triangle
- Angle
- trigonometry

- Assessment Outline -

Course Assessment:

Wk	Assessment type	Weighting	Marks achieved	Your Total
6 & 9	Tests	50%*		
3-10	All homework pieces combined	10%*		
1-10	Selected classroom work** In class investigations	25%*		
1-10	Classroom behaviour, attitude and contributions	15%*		

**specific marks to be advised and are subject to change*

*** Students may not be told which piece of classroom work is to be collecting for marking until the activity is complete.*

Specific Equipment required for each lesson:

- File/book to write in
- Pens, ruler,
- Scientific calculator