

# YEAR 9 MATHEMATICS

## TERM 1

- 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 investigating numbers, data representation and interpretation and finding the area shapes, including composite shapes.

### Course Outcomes:

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

- Use efficient written and mental strategies to solve problems involving the four operations
- Identify and use index laws
- Solve simple index equations
- Find the area of composite shapes
- 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	<b>Revision</b> <ul style="list-style-type: none"><li>• Revision of basic mathematical skills including solving problems involving the four operations</li></ul>	In class quiz- end of week 2
3-5	<b>Number and Algebra</b> <ul style="list-style-type: none"><li>• Index laws</li><li>• Scientific notation</li><li>• Solve simple index equations</li></ul>	Homework
6-8	<b>Measurement and Geometry</b> <ul style="list-style-type: none"><li>• Area of shapes</li><li>• Area of composite shapes</li><li>• Volume of cylinder and right prisms</li></ul>	<b>Open book Test end of week 6</b> Class investigation  Class assigned work
9-10	<b>Statistics and Probability</b> <ul style="list-style-type: none"><li>• Conducting experiments and displaying in a list or tree diagram</li><li>• Assigning and comparing probabilities</li></ul>	Probability investigation  <b>Open book Test end of week 9</b>

**Course Vocabulary:**

- Index/indices
- Base number
- Index form
- Expanded form
- Power
- Squared
- Cubed
- Square root
- integer
- composite shapes
- cylinder
- right prism
- tree diagram
- probability
- Area
- volume

## - Assessment Outline -

**Course Assessment:**

Wk	Assessment type	Weighting	Marks achieved	Your Total
2	Quiz	10%*		
6 & 9	Test	40%*		
3-9	All homework pieces combined	10%*		
1-9	Selected classroom work** In class investigations	30%*		
1-9	Classroom behaviour, attitude and contributions	10%*		

*\*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