

YEAR 7&8 MATHEMATICS

TERM 4

- Unit Outline -



Course Description:

This unit incorporates the Australian Curriculum Mathematic content strands of *Number and Algebra, Statistics and Probability* and *Measurement and Geometry*. The main focus of this unit is percentages, fractions, decimals, ratios, triangles, Venn Diagrams and mean, mode and median.

Course Outcomes:

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

- Multiply and divide fractions
- Connect fractions, decimals and percentages
- Find the percentage of a quantity
- Find percentage increase and decrease
- Solve problems involving rates and ratios
- Classify triangles
- Develop the conditions for congruence of triangles
- Find the mean, mode and median for sets of data and the effect outliers have of this
- Construct and interpret Venn Diagrams and two-way tables

Course Organisation:

Student's activities will include:

- Student based investigations to discover rules, laws and concepts
- 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 |
|-----|---|--|
| 1-3 | Number and Place Value- Real Numbers <ul style="list-style-type: none">• Multiply fractions• Divide fractions• Connect fractions, decimals and percentages• Find percentages of quantities• Percentage increases and decreases | <ul style="list-style-type: none">• In class assignment Friday Week1• 'Sweeties' problems solving activity• Homework pieces• Test, end of week 3 |
| 4 | Number and Place Value- Real Numbers <ul style="list-style-type: none">• Solve problems involving rates and ratios | <ul style="list-style-type: none">• Selected class work |
| 5-6 | Measurement and Geometry <ul style="list-style-type: none">• Classify triangles• Develop the conditions for congruence of triangles | <ul style="list-style-type: none">• Class assigned work• Semester 2 Test week 6 |
| 7-9 | Statistics and Probability- Chance and Data representation and interpretation <ul style="list-style-type: none">• Represent events in two-way tables and Venn Diagrams• Calculate mean, mode and median for sets of data• Investigate the effect of individual data values, such as outliers, on the mean and median | <ul style="list-style-type: none">• In class worksheet• Investigation• Homework pieces• Test end of week 9 |
| 10 | Revision | |

Course Vocabulary:

- Percentage
- Denominator
- Numerator
- Decimal
- Increase
- Decrease
- Quantity
- Rate
- Ratio
- Profit
- Loss
- Similar
- Degrees
- Scalene
- Isosceles
- Equilateral
- Pythagoras
- Congruent
- Venn Diagram
- Two-way table
- Mean
- Mode
- Median
- Outlier
- Data

- Assessment Outline -

Course Assessment:

| Wk | Assessment type | Weighting | Marks achieved | Your Total |
|-----|---|-----------|----------------|------------|
| 3 | Test | 10%* | | |
| 6 | Test | 30%* | | |
| 9 | Test | 20%* | | |
| 1-9 | Selected classroom and home work** | 20%* | | |
| 1-9 | Friday "Weekly Revision Quiz" | 10% | | |
| 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