

# PreMath 10

The objective of this course is to prepare students for Pure Math 10 who might otherwise not be capable of achieving success. It will also help good math students achieve even better results in Pure 10. Concepts from Mathematics 9 which are relevant will be stressed, but there will also be some emphasis on basic computational skills. Practice with the TI83/84 calculator will also be a part of this course, for those students who have one.

Number Operations.....	2 weeks
Number Concepts.....	2 weeks
Geometry.....	4 weeks
Similar Triangles & Trigonometry..	2 weeks
Statistics & Probability.....	3 weeks
Patterns & Relations, Equations...	4 weeks
Exam preparation .....	remaining time

## Resources

### **Textbook:**

Resources will include:

Interactions 8,9 Mathpower 10

plus various additional texts for sources of problems

### **Computer software programs** (various)

- for review and practice

### **School Website Science/Math pages**

- for review, practice, and quizzes

### **Evaluation:**

**Topic Tests: ..... 40%**

**Homework/Quizzes/Notebook ... 20%**

**Final Examination .....40%**

## **PreMath 10 Unit Plans**

Quizzes to follow each topic, with a chapter test at the end of each unit.

### **Number Operations & Concepts (4 weeks)**

Integer Ordering & Operations (with emphasis on mental computation)

Fraction Operations, including real problems

Fraction/Decimal/Percent Conversions

inc. repeating and partially repeating decimals to fractions

Problem Solving, including a variety of methods:

diagramming, tables, 'guess & test', modelling, simplifying, patterns,

logical reasoning, working backwards

Rates, Ratios, Proportions, and problem solving

Using Formulas

Square and Cube Roots (with emphasis on mental calculations)

Sets of Numbers (W, N, I, Q, Q<sup>-</sup>, R)

Exponent Rules

### **Patterns and Relations (6 weeks)**

x-y Relations:

Identifying equations and rules

Graphing lines and parabolas

Solving problems

Slope (rise/run)

Parallel & perpendicular lines

Rearranging equations to find slope

Solving linear equations

Formula rearranging

Solving simple quadratic equations

Polynomials:

Definitions

Operations (+, -, x, and dividing by monomials)

Factoring

## Geometry (3 weeks)

Surface Area and Volume (right prisms, cylinders, cones, pyramids)

- estimate, measure, calculate

- solve problems

Pythagorean Theorem

Measuring and classifying angles

Transformations

- drawing, interpreting, and describing

## Trigonometry and Similar Triangles (2 weeks)

Similar Triangles

- recognizing, solving

- problems

Primary Trig Ratios

- terms

- ratios

- solving for missing side, angle

- solving problems

## Statistics and Probability (2 weeks)

Analyzing and interpreting real graphs

(circle, bar)

Collecting information and graphing

Bivariate data: Scatterplots

- analyzing and interpreting

- constructing

- line of best fit (by eye)

- Interpolating & extrapolating to obtain information

- describing relationships